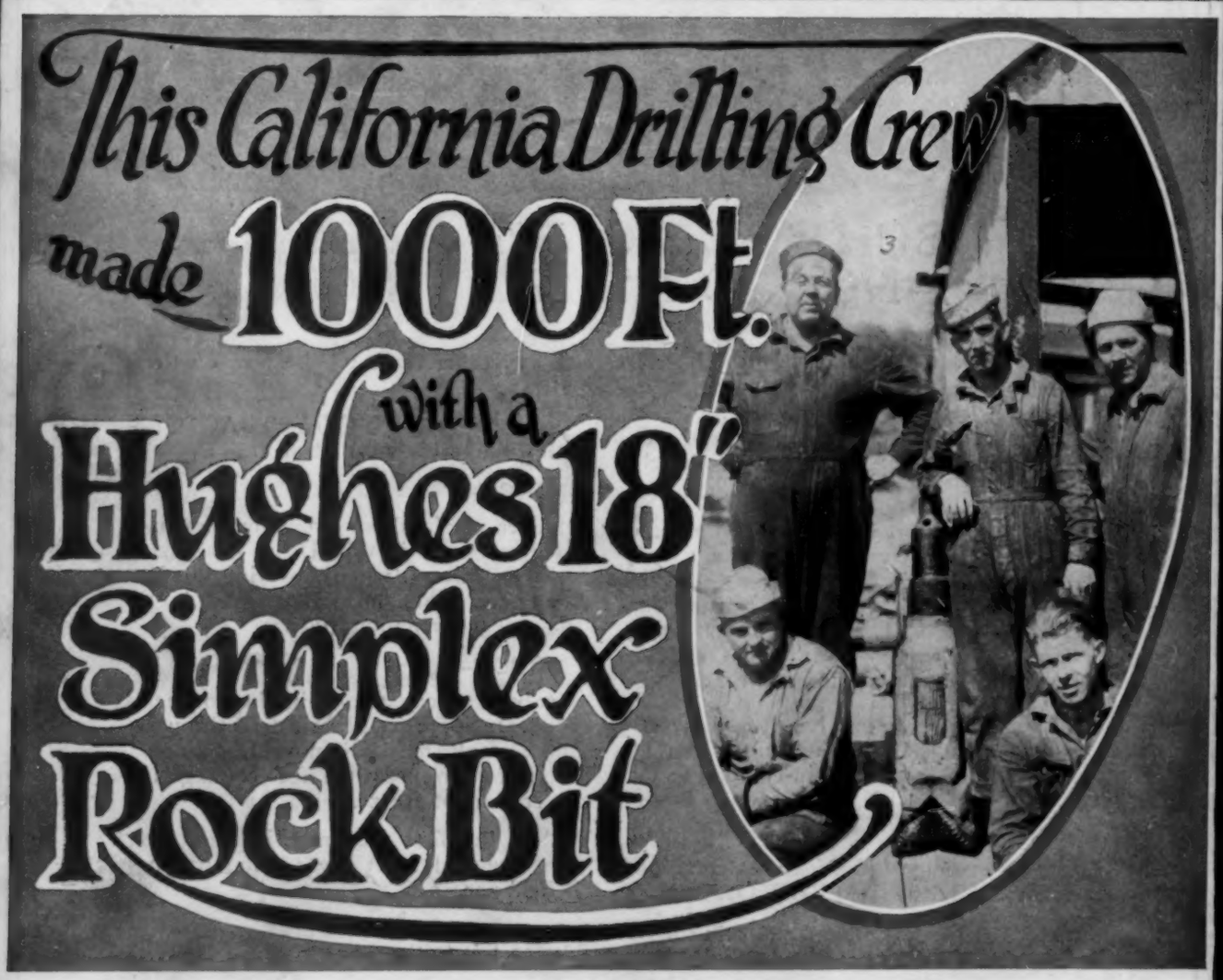
The OIL WEEKLY

A Journal for
Oil and Gas Producers and Field Men

HOUSTON
LOS ANGELES
PITTSBURGH
FT. WORTH
TULSA
CHICAGO

Vol. 32. No. 5 JANUARY 26, 1924 10 Cents Per Copy

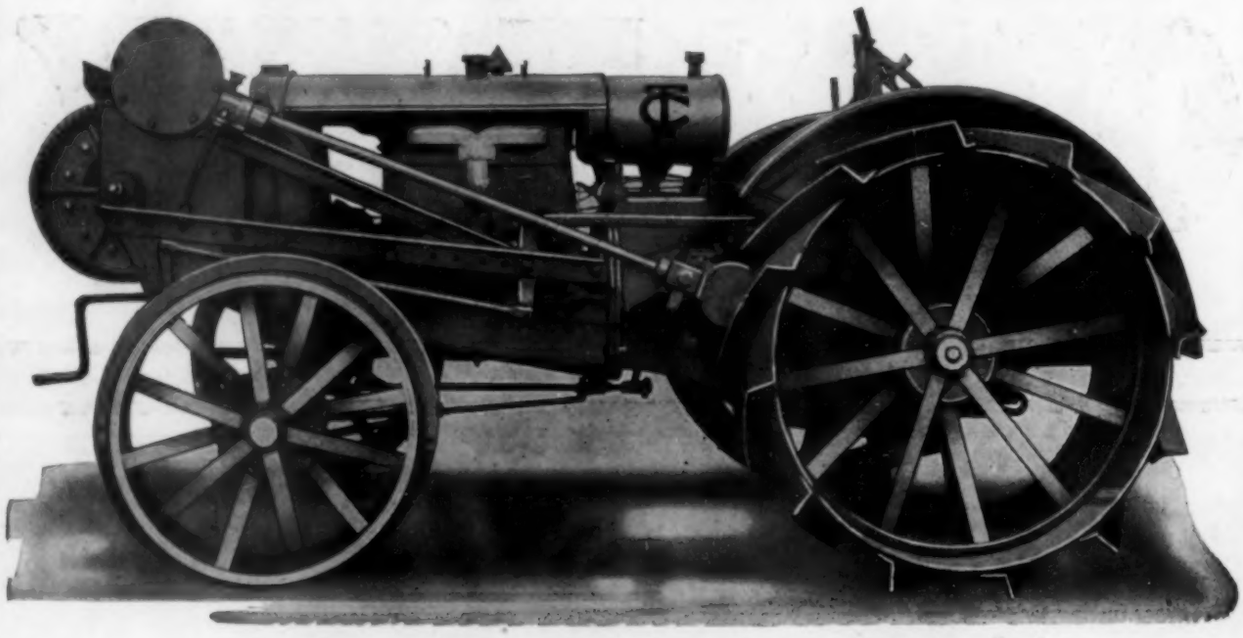


Photograph taken at Shell Co.'s La Merced 9-A, Montebello, California. They were drilling at 3775 feet, having just completed a 55 foot run through hard formation with 10½" Hughes Rock bit, using one set of cones. 1000 feet of hole was drilled with the 18" Hughes Rock bit in the same hole.

Sold by Supply Stores Everywhere

HUGHES TOOL COMPANY, HOUSTON, TEXAS
LOS ANGELES, CALIFORNIA

Twin City Tractor Hoist



BUILT TO DO THE WORK —NOT TO MEET A PRICE

The TWIN CITY TRACTOR HOIST is not a farm tractor with a hoist attachment, but is a high grade tractor hoist especially designed for the pulling of rods and tubing, casing and general oil field use.

This tractor hoist is being used by some of the largest companies in the world, such as: Sinclair Oil and Gas Co., Empire Companies, Phillips Petroleum Co., Gypsy Oil Co., Roxana Petroleum Co., Comar Oil Co., Wolverine Oil Co., Mid-Kansas Oil and Gas Co., and others.

The above operators have used practically every type of tractor on the market. What they have to say in comparing the TWIN CITY with other tractors is significant.

Compare some of the features contained in the TWIN CITY TRACTOR HOIST with any other tractor hoist now on the market:

Operator of TWIN CITY TRACTOR HOIST faces his work at all times.

WINCH—

Propeller shaft drive from motor enclosed and runs in oil. Drum has positive free release when lowering loads. Two diameters of drum allow extra high rope speeds for pulling rods.

MOTOR—

16 valves (2 exhaust, 2 intake to each cylinder). Force feed lubrication through hollow crank shaft. Removable cylinder walls. Motor uses oil for cooling in winter, cannot freeze.

This is the first tractor hoist that has been designed from the ground up for oil field use.

Designed and built complete in the Twin City Factories.
Let us send you descriptive folder on this tractor hoist.

Sole Agents

TULSA RIG, REEL & MANUFACTURING COMPANY

Eighth Floor Atlas Life Building

TULSA, OKLAHOMA

American Steel Derricks *American Steel Pony Bull Wheels* *Twin City Tractor Hoists*

THE OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 a year; 10 cents a copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Quality

To test the quality of DAMASCUS BLADES they were driven through steel plates one-eighth inch thick.

World-Famed for Quality

SUPER-SERVICE POINT

The primary rule of CONTINENTAL Super-Service is that every product we sell shall be of the **highest quality obtainable.** You can be certain that "If CONTINENTAL Sells It There Is No Better."

THE CONTINENTAL SUPPLY CO.

General Offices: St. Louis

Export Office: 2 Rector St., New York

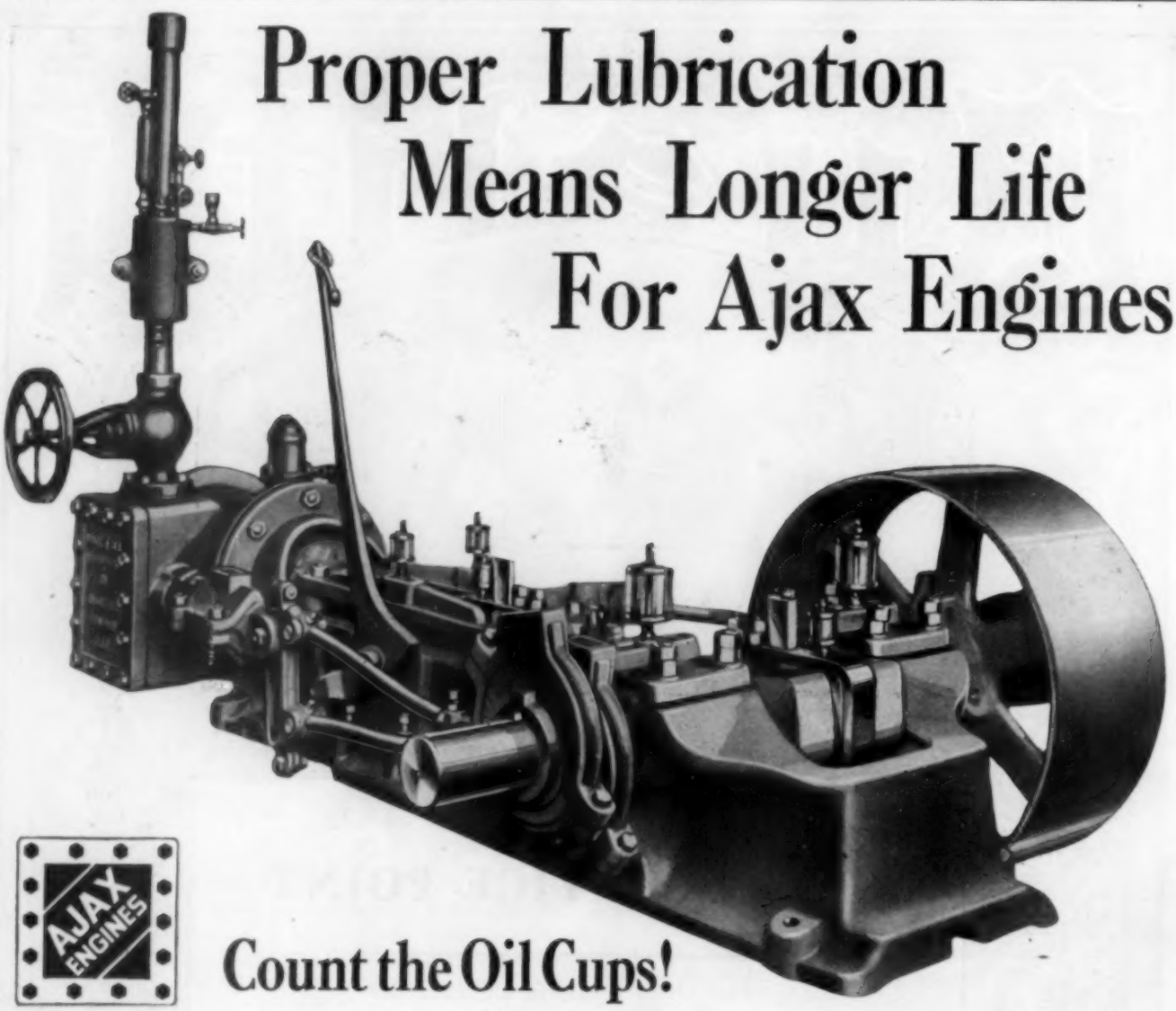
MORE THAN 70 STORES IN THE OIL COUNTRY

QUALITY SERVICE PRICE

QUALITY SERVICE PRICE

CONTINENTAL

Proper Lubrication Means Longer Life For Ajax Engines



AJAX ENGINES

Count the Oil Cups!

There are Sight Feed Oilers on the two Main Bearings and the Guide Top; also Grease Cup on the Crank and Crosshead Pins. Large oil pockets are also to be found on the eccentric straps, steam chest, stuffing box glands and valve.

The improved sight feed lubricator extending to the center of steam line insures proper oiling of valve and cylinder at all times.

These oil pockets and sight feed oilers together with the precision of manufacture, for which Ajax Engines are noted, insure longer life and better service.

Distributed by
National Supply Companies
In every oil field

Manufactured by
Ajax Iron Works
Corry, Pa.

3465

AJAX DRILLING ENGINES

INDEX TO ADVERTISERS

A

Ajax Iron Works 4
American Well & Prospecting Co...Back cover
Axelson Machine Company ..... *
Anderson & Anderson ..... *

B

Baker Casing Shoe Company 61
Barnickle, W. S., Company.....58
Baash-Ross Tool Company.....33
Beaumont Well Works Company 61
Bridgeport Machine Company.....48
Bessemer Gas Engine Company 70
Boykin Machine & Supply Company ..... *
Brownell Company, The ..... *
Brown Welding & Machine Company.....44
Black, Sivalls & Bryson.....69
Black, C. N. 62
Buckeye Traction Ditcher Company ..... *
Burns Tool Company 53
Butler Manufacturing Company ..... *
B. & C. Machine & Foundry Company..... *
Braden Company, The 10

C

Carter, O. M. 6
Caudill, S. J. 62
Clark Machine Company ..... *
Commercial National Bank 53
Continental Supply Company 3
Connoly Agency, D. F. 45
Coste, E., & Co. 62
Crain Ready-Cut House Company ..... *
Cosden & Co. 56
Cameron Iron Works ..... *
Colonial Steel Company ..... *

D

Darling Valve Manufacturing Company.....24
Deane, Early 63
Deep Well Engineering Company ..... *
De La Vergne Machine Company ..... *
Deussen, Alexander 62
Detlor, W. Edison ..... *
Donoghue, David 62
Dunn Manufacturing Company ..... *
D. & B. Pump & Supply Company.....61

E

Exchange Banks of Tulsa..... *
Exner-Dodge Packer Company.....40

F

Fort Worth Laboratories 63
Foster & Reiter 62
Foxboro Company, Inc. 58
Franklin Valveless Engine Company ..... *
Freeborn Engineering Company 63
Foamite-Childs Corporation ..... *
Frick-Reid Supply Company 39

G

Gantz Tank Company ..... *
Guiberson Corporation 57
Ged Iron Works ..... *
Gaso Pump & Burner Manufacturing Co....23
Gulf Coast Machine & Supply Company..... *
Gulf Refining Company 72
Gulf Publishing Company.....59-74

H

Hardway & Cathey 62
Harrisburg Pipe & Pipe Bending Company ..... Inside Back Cover
Harrisburg Pipe & Pipe Bending Company of Texas 36
Heitmann, F. W., & Co. 61
Herald Brothers 62
Heydrick Mapping Company 63
Hirsch & Hannay 62
Hope Engineering Company ..... *
Hopkins, Edwin B. 62
Hough Manufacturing Company, Chas. N....52

H—(Continued)

Houston Oil Field Material Company 61
Hughes Tool Company .....Front Cover
Humble Oil & Refining Company ..... *

I

Imperial Brass Manufacturing Company..... *
Improved Rotary Bit Company ..... *
International Supply Company ..... *
International Derrick & Equipment Co. ..... *

J

Jones Company, S. M. ..... *

K

Kansas City Hay Press Company.....68
Kansas City Structural Steel Company ..... *
Keystone Pipe & Supply Company.....16
Keystone Driller Company 41
Kuehnle, Erick F. 62

L

Layne & Bowler 43
Lassen Hotel ..... *
Lockett, A. M., & Co. ..... *
Ludlow Valve Manufacturing Corp. ..... *
Lucey Manufacturing Company ..... *
Lufkin Foundry & Machine Company.....14

M

Maloney Tank Manufacturing Company.....42
Matson, George C. 62
McGregor Working Barrel Company ..... *
Moore, Lee C., & Co. ..... *
Myrick Machine Company ..... *

N

National Supply Companies 64
National Transit Pump & Machine Co. 8
National Turnbuckle Derrick Company.....28
Norris Bros. ..... *

O

Oil Conservation Engineering Company ..... *
Oil City Iron Works ..... *
Owen, L. H. 62
Oil Well Supply Company 66
Oil Well Service Company 61

P

Palmer Specialty Company ..... *
Parkersburg Rig & Reel Company.....46
Peden Iron & Steel Company.....54
Pelican Well Tool & Supply Company.....60
Pennsylvania Tank Car Company ..... *
Petroleum Rectifying Company 36
Petroleum Supply Company ..... *
Pioneer Tank & Boiler Company ..... *
Prentiss Vise Company ..... *

R

Reading Iron Company 51
Ring, Dewitt T. 62
Rossendale Reddaway Belting & Hose ..... *
Reading Steel Casting Company ..... *
Rotary Disc Bit Company ..... *
Robinson Packer Company ..... *
Republic Supply Company ..... *
Rock Island Plow Company..... *

S

Safety Pulling Machine Company.....38
Schofield, D. L. ..... *
Shaffer Company, J. E. ..... *
Sinclair Refining Company 17
Southern Engine & Pump Company..... *
Southern Engineering Supply Company 63

S—(Continued)

Southern Brass Company 40
Southwest General Electric Company..... *
Spence, H. M. 58
Standard Seamless Tube Company.....52
Stone, Jesse R. 62
Sullivan Machinery Company 54
Standard Blue Print Map & Eng. Co.....16
Sunshine State Oil & Refining Company....56
Superior Tube Company ..... *
Standard Engine Company 14
Sturm, L. W. 63

T

Tucker, Jas. I., Company.....62
The Texas Company ..... *
Texas Oil Pump Company 50
Texas Pipe & Supply Company.....61
Texas Petroleum Bureau 63
The Titusville Forge Company.....27
Trumble Gas Trap Company ..... *
Tulsa Boiler & Sheet Iron Works..... *
Tulsa Rig Reel & Manufacturing Company.. .....Inside Front Cover

U

United Iron Works ..... *

V

Vinson, Elkins & Wood.....62
Voorhees Rubber Manufacturing Company... *

W

Webster, C. W. 63
Westcott Valve Company, Inc..... *
Western Machinery Company ..... *
Westinghouse Electric Manufacturing Co.... *
Wilson & Broach 61
Wilson & Willard Manufacturing Company..50
Williams, P. N. 62
Williamsport Wire Rope Company.....54
Wyatt Metal & Boiler Works..... *
W-K-M Company 30

*Printed in one or more issues in each month.

Save $4.20

Fifty-two copies of The OIL WEEKLY will cost you $5.20 at a news stand. You can get a year's subscription for $1.00.

The savings are worth while.
Use the coupon.

The OIL WEEKLY

P. O. Box 1307 Houston, Texas

Enter my name for one year's subscription to The OIL WEEKLY, for which you will find enclosed check for $1, as payment in full.

Name .....

Address .....

Please check below branch of industry engaged in.

Producing Executive◇

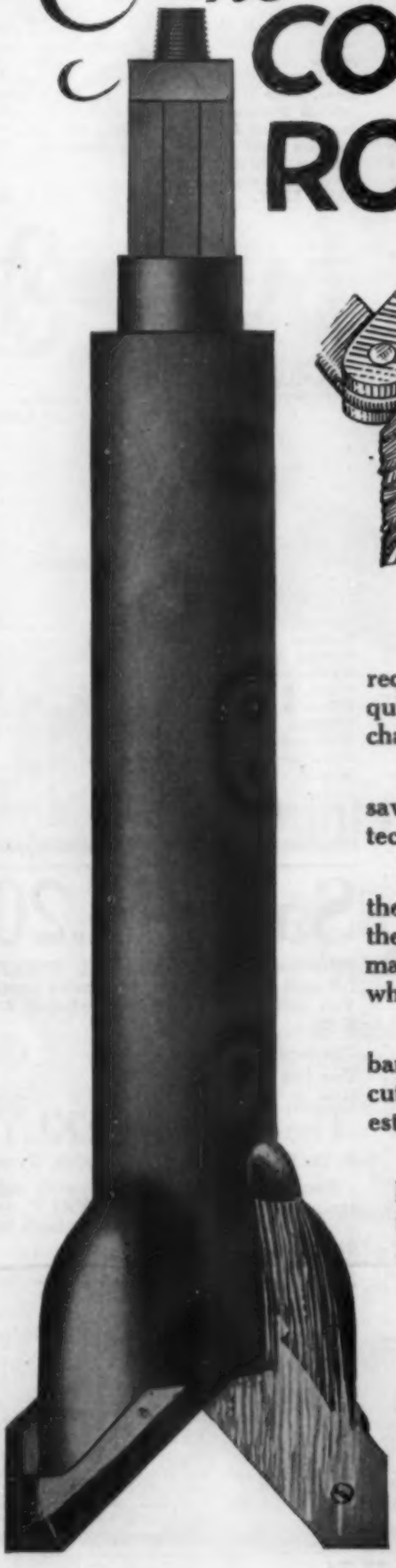
Field Man◇ Pipe Line◇

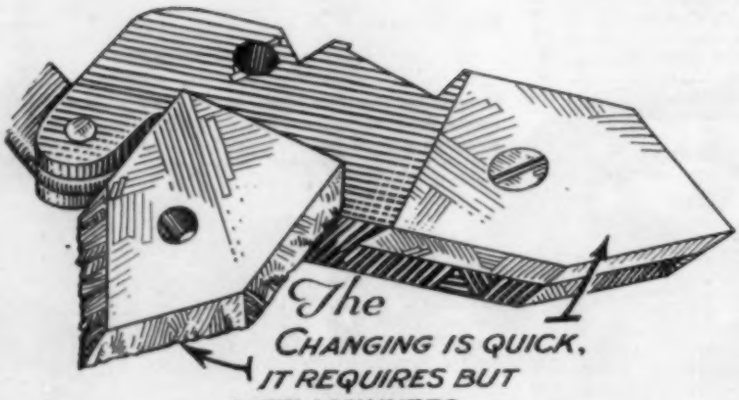
(BE SURE TO CHECK CLASSIFICATION, otherwise we will have to hold up entering your subscription until we can get the information from you.)

1-26-24

Guide for Purchasers on Pages 73-74

The STANDARD COLLAPSIBLE ROTARY DRILL





The CHANGING IS QUICK, IT REQUIRES BUT A FEW MINUTES

Descends inside the drill stem and expands to required diameter at bottom of the collar. It is quickly collapsed and withdrawn to surface for change of cutters, without removing drill stem.

It is the driller's and roughneck's friend, as it saves them much labor, and is the well owner's protection against rapid depletion of his bank account.

The Core Barrel descends like the drill inside the drill stem and is revolved by lugs in bottom of the drill stem collar. It is withdrawn in the same manner as the drill. The cutters are removable and when dull can be easily and quickly replaced.

The drill stem can be revolved while the core barrel is descending and ascending, and while the cutters are being changed, which prevents the slightest danger of "freezing".

Drills for 4 inch drill stem cut 8 and 10 inch holes. Drills for 6 inch drill stem cut 14 and 16 inch holes. However, each drill can be equipped to cut larger or smaller holes.

Write for booklet containing full information

MANUFACTURED EXCLUSIVELY BY

O. M. CARTER

206-7-8 SCANLAN BLDG.

HOUSTON, TEXAS

Say you saw it in The Oil Weekly

THE OIL WEEKLY

An International Oil Publication for Oil and Gas Producers

Copyright 1924 by the Gulf Publishing Company

MEMBER AUDIT BUREAU OF CIRCULATION

Established 1916

HOME OFFICE—Houston, 1716 Dallas Ave.
FORT WORTH—212 W. T. Waggoner Bldg.
TULSA—225 Atco Bldg.

Published weekly by
Gulf Publishing Company
HOUSTON, TEXAS
R. L. DUDLEY, EDITOR AND MANAGER

PITTSBURGH—1507 First Nat'l Bank Bldg.
CHICAGO—453 First National Bank Bldg.
LOS ANGELES—1201 Haas Bldg.

Vol. 32 SATURDAY, JANUARY 26, 1924 No. 5

In this issue.

California Surprised

Figures of the American Petroleum Institute indicate that stocks in California were drawn upon in December. This came as a great surprise to oil men in that state since it had been estimated that reserve stocks would not be touched before June of 1924. See page 31.

The Mellon Plan

Members of the Ways and Means Committee are considering a move to further restrict depletion allowances made to oil producers on their tax exemptions. The committee considers Mellon's plan a little too liberal. Page 60.

What Science Does

Between 1907 and 1922 the rate of increase in the amount of oil produced in this country went from 7.1 per cent to 16.6 per cent. In the opinion of an engineering expert this is accounted for by better field methods, more scientific development and closer organization. Read his discussion of improved technique. Page 19.

Cement Troubles

Many difficulties are encountered with cement in using it to shut off water. There are many elements that enter into what may be called a good cement, and a great many conditions determine its success when used in an oil well. Read what an expert chemist says about it. Page 25.

Big Plans

Many major oil companies are contemplating wildcatting along the Balcones Fault. This fault has already been responsible for a good deal of producing territory, and indications are that other fields may be discovered along the fault. Considerable acreage has been blocked. Page 49.

Louisiana Tests

Cotton Valley and Oakland Parishes are to be tested thoroughly. Good showings have been encountered in both places and prospects are good for commercial producers. Page 38.

Crude Changes

Following the precedent set during the first weeks of January, the past seven days saw practically every crude price in the country advanced. The market section begins on page 15.

Corsicana Stocks

Stocks of crude in the Corsicana-Powell field totaled 29,567,125 barrels on January 1. Plans are being worked out to make this district a storage center for light oils. Page 63.

Regular Features

	Page
Crude Oil Market	15-16
Coastal Bollweevil	68
Corsicana	63
Field Notes Begin	31
Louisiana Fields	38
Manufacturer and Supply Dealer Notes	65
New Equipment	67
North Central Texas	41
Permits to Drill	47
Personals	29
Production Tables	32
"Squeaks"	71
U. S. Completions Begin	41
West Coast	31-33
Wildcats	49-56

KEY TO ABBREVIATIONS

Following is the explanation of abbreviations and signs used in drilling reports, completions, etc.: *—dry, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

More Teapot Muddle

Testimony of Archie Roosevelt has caused considerable stir in the already sensational case and late developments point toward the cancellation of the lease. Page 12.

1924 in the West

Indications point toward a most active year in the fields of the Mountain States district and with California and Texas now dropping from the limelight as excess oil producers, these fields are selected as the center of interest during the new year. Page 11.

Watch Reagan County

Chances for a high gravity oil field in Reagan County are growing. Two more pumpers have been brought in on University lands. Both the new wells belong to the Big Lake Oil Company. Page 35.

Independent Relief

A new scheme in the Mid-Continent would centralize the crude purchases of smaller refiners to a degree where Oklahoma and Kansas independents would be on a level with the major buying concerns. Page 15.

All Branches Shared

The disastrous period of 1923 in the oil industry was shared by all divisions and all divisions should equally share in the prosperous year forecasted for 1924.

Oklahoma Steady

Opening of the Burbank field by the removal of drilling restrictions has not boosted the total production of the state materially. Production figures have increased approximately 10,000 barrels. See page 34.

Colorado Steps Out

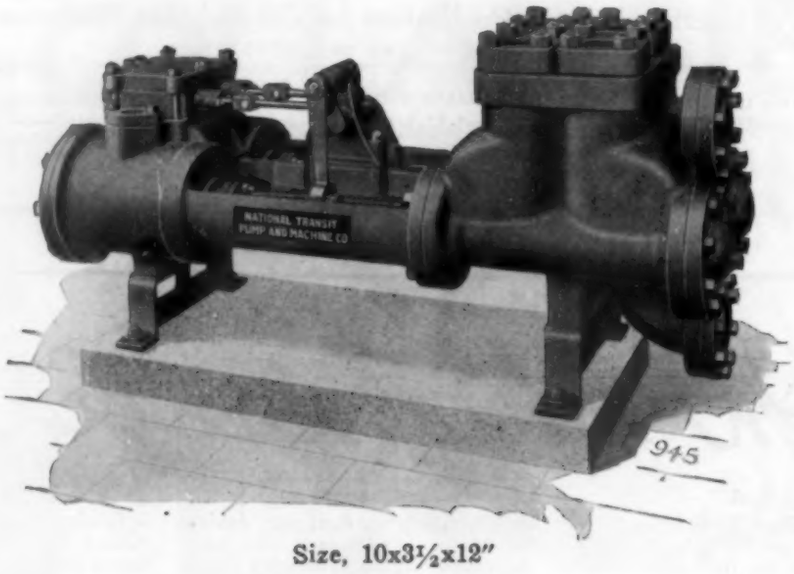
Colorado is forcing herself to the attention of oil men. An oil producer is reported from Moffit County. Not long ago the Union Oil Company's gasser developed into a producer. The log of this well is given on page 37.

SUBSCRIPTION RATES

One Year....$1.00 The Copy....$ .10 Foreign Subscription. ..$2.00

ADVERTISING RATES

on application. Accounts payable to GULF PUBLISHING CO.



Size, 10x3½x12"

LOOK 'ER OVER

No frills, no ruffles, just clean cut lines that mean strength, and lots of it. That's her all over.

The way she forces oil through a 3" makes some of the big 6" lines hustle to keep up.

The point is she works best when bucking 500 to 650 pounds pressure.

So over the mountain and through the woods, or any place where the larger size pipe is difficult to transport and lay, you can't beat one of these Valve Pot Type pumps for handling a lot of oil.

Get Our Bulletin No. 105-A

NATIONAL TRANSIT
Pump & Machine Company

DISTRICT OFFICES

Kansas City Denver Houston New York Pittsburgh Cleveland Philadelphia

© CI 8607986

JAN 28 1924

JAN 28 1924

THE OIL WEEKLY

An International Oil Publication for Oil Producers

ESTABLISHED 1916 — MEMBER AUDIT BUREAU OF CIRCULATION — VOL. XXXII-No. 5

The A. P. I.

Those people who have expressed the idea that there is something radically wrong with the American Petroleum Institute, are now, we observe, regular attendants upon the Institute meetings. That there is no merit to suggestions they have made for the betterment of the Institute cannot be said wihout a most careful consideration of those suggestions.

But—those oil men who attended the recent meeting of the A. P. I. in St. Louis are not going to admit without considerable argument that there is anything wrong with the A. P. I.

No oil man who attended the meeting and who sat through any material number of the sessions did so without being benefitted. The only thing wrong with the A. P. I. that we can point out right off the reel is that more oil men do not attend the sessions.

It is to be hoped that next year the meeting will be held in a section that will draw an even greater attendance than the St. Louis meeting did—and it was the biggest in the history of the organizatoin.

If foreign oil companies could fully appreciate the educational value of having their representatives attend such meetings as that of the A. P. I. and the big exposition which is to be an annual event at Tulsa, they would profit materially thereby, and more cordial relations between American and foreign companies would exist. And if it would profit the representatives of foreign companies to go to the expense of attending the A. P. I. and the Petroleum Exposition, how much more profitable an investment would it be for every possible American oil man to attend them?

The OIL WEEKLY wants only such subscribers as are engaged in the oil producing or pipe line business, or sub-branches of the producing and pipe line business. It has no desire for investor circulation, and it reserves the right and will exercise the right to reject subscriptions coming from persons whose only interest in the oil industry is through the purchase of oil stock.

R. L. DUDLEY, Publisher.

Eliminating FIRE HAZARD
WITH
BRADEN Sectional Steel Houses

Practically no industry presents so great a fire menace as does the oil industry. Dealing with the most inflammable of liquids at all times, the greatest of caution should be used.

Thousands of dollars worth of valuable machinery, tools, etc., have been destroyed by fire as a result of their being housed in wooden buildings.

One of the many features that make Braden E-Z-BILT Sectional Steel Houses the logical choice for oil industry use, is their absolutely fireproof construction. Side-walls, roofs, trusses, sashes and doors are all constructed entirely of steel.

Braden E-Z-BILT Sectional Steel Houses are especially adapted for use as Ware Houses, Power Houses, Boiler Houses, Tool Houses, Gasoline Plants, Filling Stations, Garages, etc.

Information and Quotations on Request

The BRADEN COMPANY
TULSA, OKLAHOMA

Say you saw it in The Oil Weekly

1924 to Be Big Year for Mountain States

Section offers greater possibilities than other oil districts—Much expansion in '23

By A. J. Hazlett
Publisher of the Inland Oil Index

FROM whatever angle the petroleum and natural gas industries of the Rocky Mountain region are viewed, it is well to bear in mind that the fields in this territory differ from all other oil fields of the country in that their importance is increasing annually and probably will be for the next 10 years, while every other division has practically reached its peak of development and will be on the down grade for the next 10 years. This is true as regards production, transportation, distribution, marketing and refinery progress.

As great as was the oil progress of the Rocky Mountain region in 1923, the present year gives promise of greater achievement. With the completion of the Sinclair pipe line, wider markets will be opened for crude petroleum. Independent interests like The Texas Company and the White Eagle will afford healthy competition. Higher prices for crude will cause an intensive drilling campaign and we may look confidently forward to a busy and prosperous year in 1924.

1923 Production

While all of the production figures have not been checked for 1923, the fields in Wyoming produced approximately 45,000,000 barrels, of which 35,000,000 barrels came from Salt Creek. Production from Colorado, Montana and small quantities from Utah and New Mexico, added to Wyoming, will swell the grand total from the Mountain States to more than 50,000,000 barrels.

Montana, Colorado, New Mexico and Utah will all come in for big plays in exploration work for oil and natural gas in 1924. Less determined efforts will also be made in Idaho, Arizona, the Dakotas and Western Nebraska and Western Kansas. Deeper drilling will be the keynote to all wildcat operations in the Rocky Mountain states in 1924. Californians are coming into the territory and acquiring structures which local interests have in the past refused to drill because of the great depth to the producing horizons and the expense of making a test. The discovery of both gas and oil in Northern Colorado by the Union Oil Company of California at close to 4300 feet will give an added impetus to deeper drilling.

Wildcat Work

Wildcat work in the Rocky Mountain region in 1923 resulted in the bringing in of four new oil and gas fields and the further proving of several others. At Rex Lake in the southern part of Wyoming, 22 miles west of Laramie on section 26-16-77, the Ohio Oil Company has a 500-barrel well at approximately 4100 feet. This structure was passed upon by the company's chief geologist, C. J. Hares. On the Medicine Bow structure, 13 miles southwest of Medicine Bow, in the southern part of Wyoming, the Southwestern Petroleum Company (Hochstetter & Forman interests) found a pay sand at 4120 feet and the well made several flows, but it is being drilled deeper for lower sands. On the Black Mountain anticline in Washakie County, east of Thermopolis, the Utah Oil Refining Company has a 300-barrel well in the Tensleep sand at a little less than 4000 feet. This is a black oil proposition, while the other two prospects for new fields are light oil propositions. One big gas well was brought in late in the year in Northern Colorado by the Union Oil Company of California. It was discovered on the Wellington structure about 15 miles south of the Wyoming state line, the pay sand being found at 4285 feet. After it had been blowing gas at the rate of 80,000,000 cubic feet daily into the air for more than a month it was shut in ,but before it was brought under control it was spraying from 200 to 500 barrels of oil.

Some of the fields that were further proved in the year were the Billy Creek gas field in Johnson County, Wyoming, the Baxter Basin gas field, Lance Creek, Hogback and Teapot Dome. At Billy Creek a second gas well proved to be of about the same capacity as the discovery, testing 70,000,000 cubic feet. At Baxter Basin, both the Ohio and the Midwest companies each completed gas wells in the year and both are now trying to go deeper for oil. At Lance Creek the Ohio Oil Company completed an edge well that started off several months ago at better than 3000 barrels a day and is still holding up at 2000 barrels. In Northeastern New Mexico the Midwest Refining Company has brought in two new wells on the Hogback structure, each with an initial production of better than 100 barrels of light oil at depths less than 1000 feet. On the Teapot Dome the Mammoth Oil Company deepened an old gas well on section 33-39-78 and found the third Wall Creek sand to be oil bearing. With this sand penetrated only 12 feet and not having been shot, it is flowing by heads at the rate of 80 barrels daily. Its importance lies in the fact that the third Wall Creek embraces a larger area than any of the other sands at Salt Creek and Teapot and may add thousands of acres to the producing area of both fields.

Big Possibilities

At the close of the year 1923 some of the best wildcat prospects in the Mountain States were as follows:

Marine Oil Company, on Sheldon Dome in Fremont County, Wyoming.

Union Oil Company, at Circle Ridge in Fremont County, Wyoming.

Kinney-Coastal Oil Company, at Dry Creek in Fremont County, Wyoming.

Central Pipe Line Company of Chatham, Ontario, Allen Lake, west of Medicine Bow, Wyoming.

Midwest Refining Company, North Casper Creek, Wyoming.

Ohio Oil Company, Mahoney Dome, in Capon County, near Lost Soldier, Wyoming.

Producers & Refiners, at Enos Creek, near Grass Creek, in Wyoming.

The Texas Company, on Hamilton Dome, near Graig, Colo.

R. C. Tarrant et al, on Steele Creek, in Johnson County, Wyo.

Ohio Oil Company, near Malta, in Northern Montana.

What is perhaps of more importance to the oil industry in general is the tremendous amount of drilling that is bound to take place in the Rocky Mountain region in 1924. Already provision has been made for the drilling of approximately 600 new wells in the Salt Creek field alone. A new factor to be reckoned with in drilling in the Mountain States in the future is the rotary system, probably a score of rotary rigs now being scattered throughout the territory, it being claimed for them that they cut down the time in drilling and greatly lessen the cost. Use of diamond drills will also play a more important part in wildcatting in 1924 than in 1923, although there were several holes drilled with them last year.

Expansion Pipe Lines

More miles of pipe line were laid in the Mountain States in 1923 than in all of the years that have gone before. Producers & Refiners Corporation completed a 6-inch line from Salt Creek to Parco in Southern Wyoming, a distance of 165 miles. The Sinclair Pipe Line Company started and completed a 12-inch line from Salt Creek to Freeman, Mo., a distance of 720 miles. One half of this distance approximately will be in the State of Wyoming. Illinois Pipe Line Company completed an 8-inch line from Salt Creek to Illco, about 39 miles. A short international 6-inch line was completed by the Illinois from Northern Montana across into Canada. Midwest laid a welded eight inch gas line from Salt Creek to Casper refineries and Fargo Oil Company laid an oil pipe line from Poison Spider to Casper. Producers and Refiners laid a short line from its Salt Creek line to its Parco line, to connect with the refinery of the White Eagle Oil and Refining Company east of Casper, Wyoming Gas Company laid about 20 miles of 14-inch line in Central Wyoming. There were other short gas and oil lines laid in the year.

Prospect for more pipe lines in 1924 are good. No doubt gas will be piped from Northern Colorado to Denver and other Colorado towns. A line is planned from Baxter Basin to Salt Lake, Utah, unless gas is found for that market nearer home. Billy Creek and Teapot gas may be brought to Casper in 1924. Rex Lake will be connected with the Illinois line at Rock River. Refineries at Great Falls, Mont., will probably be connected with the Kevin-Sunburst field this year. No doubt there will be still other lines.

Wyoming and Montana saw several

Archie Roosevelt's Testimony Starts Steps Toward Cancellation of Lease

Washington, D. C., Jan. 24.—Latest developments in the Teapot Dome hearing indicate that there is a possibility of the annulment of the lease. This step has been recommended by Senator Walsh since the testimony of Archie Roosevelt was given before the investigating committee. Roosevelt testified that G. D. Wahlberg, secretary to Harry Sinclair, had told him that he has canceled checks for $68,000 drawn by Sinclair to the order of the foreman of Albert B. Fall's ranch.

President Coolidge has personally ordered the Department of Justice to make a full and complete investigation into the circumstances regarding the leasing of the naval oil reserve to Sinclair interests by Ex-Secretary of the Interior Fall.

However, it appears that this step may be blocked. Senator Walsh has declared that he will ask the committee to make provision for the employment of special counsel to prosecute the case independently of the Department of Justice. This move is said to be necessary because of the friendship between Attorney General Daugherty, Ex-Secretary Fall, and Harry F. Sinclair.

Several members of the committee have expressed the belief that cancellation of the Teapot Dome lease involves many serious questions and that the matter is one for legal experts to decide. Ex-Secretary Fall appeared before the investigating committee on Friday of last week. He denied the charges that he had ever received money from Sinclair. Sinclair is in Europe at this time, but will be summoned to appear before the committee upon his return to this country.

New Mexico Test Makes Wet Gas from 1824 Feet

Artesia, New Mexico, Jan. 21.—A wet gasser with a daily flow estimated at five million cubic feet from sand pay at 1824 feet is reported from the Illinois Producers Company's fourth test on State land, section 25, 18-28, Eddy county, resulting in a heavy demand for nearby acreage and stimulating wildcat activity in the Pecos River valley section of Eddy county. The unusual quantity of gas encountered by this test well gives rise to the belief that a larger oil producer will be obtained when the hole is carried down to the oil sand pay around the 1900-foot level than the discovery well. This gasser is located about one mile from a 25 barrel high gravity oil producer completed by the Illinois Producers on State land, section 31-18-28, Eddy county and east of the Pecos River, early last fall from sand pay at 1890 feet.

J. Alvin Gardner, who resigned from the Gulf Production Company on January 1 to enter business for himself, is now associated with R. O. Harvey and L. H. Cullom, independent oil operators of Wichita Falls with producing properties in the North and Central West Texas district. Headquarters are maintained in the City National Bank Building, Wichita Falls.

new refineries built in 1923. Producers & Refiners Corporation built a 20,000-barrel plant at Parco on the Union Pacific railroad in the southern part of the state of Wyoming. At Casper, the White Eagle Oil & Refining Company is just putting the finishing touches on a 3000-barrel works, while in Montana the Stevenson interests took over the American's plant at Great Falls and completed it and now has plans under way for enlarging it to 1500 barrels capacity. In Casper and at Greybull the Midwest is greatly enlarging its asphalt plants to take care of great demand for asphalt in this territory.

Plant Capacity Doubled

Capacity of natural gasoline plants in Wyoming has been more than doubled in 1923 with a further expansion in prospect for 1924. At Salt Creek the Midwest has added another unit to its gas plant, giving it a total of more than 30,000,000 cubic feet daily. Both the Ohio and Carter companies have completed plants in the south end of the field with capacities of 8,000,000 cubic feet daily. The E. T. Williams Gasoline Company has doubled its capacity at Salt Creek. Producers & Refiners' works at Casper have been running to full capacity of more than 30,000,000 cubic feet daily for all of 1923. Plans are now decided upon for natural gasoline plants at Lance Creek and Big Muddy and work will start on them with the opening of early spring. Several propositions are also said to be under consideration in Montana.

Use of Electricity

Work is well under way by the Midwest Refining Company for the electrifying of Salt Creek. The first unit to cost approximately $5,000,000 is now under construction. It is estimated that when fully completed the work will have a total cost of $50,000,000. This will give the outsider not familiar with this country some idea of what values the big interests place on the Salt Creek field, as the expect to get more than $50,000,000 in returns or they would not authorize so great an expenditure.

The past year was a banner period in the building of storage for crude petroleum. Probably not less than 20,000,000 barrels of steel storage was added to the storage of the major companies operating in the Rocky Mountain region. This includes 12,000,000 by the Sinclair interests, 6,000,000 barrels by the Midwest interests, while the remainder was apportioned among the Producers & Refiners Corporation, The Texas Company, White Eagle, Mutual and others. There is a considerable storage program outlined for 1924.

American Government Supports Oil Companies In Opposition to Mexican Rebel Tax Decree

Washington, D. C., Jan. 23.—The United States government, not having recognized the Mexican revolutionists, will give its protection to American oil firms who refuse to pay taxes to the de la Huerta faction, it is declared by State Department officials.

The American consul at Vera Cruz, it was stated, has advised Americans in that district to refuse to pay tax levies attempted by the revolutionists. Nevertheless, there have been some instances, particularly in the case of ships, where the rebels have collected export taxes on cargoes destined for the United States, and the State Department has received complaints from some business interests against such forced collections.

Attempts to collect taxes have been aimed particularly at American oil companies, it is asserted, and it is understood that intimations have come to the State Department of the intention of these concerns to refuse payment. No indication has been given as to how far the government would go in attempting to protect oil companies which hold out against rebel tax demands, but the attitude of the administration against the Mexican revolutionary situation is such that it is believed that more than moral support could be counted upon if conditions became serious.

Since the Obregon government does not recognize the existence of any rebel authority to collect taxes, the regular imposts are legally still due to the Obregon government, and business men are put in the position of being liable for two tax collections. The American government takes a particularly strong stand in the case of attempts by the rebels to collect taxes on exports which come within the scope of the so-called de la Huerta-Lamont agreement, payments upon which are supposed to apply on the national debt of Mexico. The de la Huerta faction recently issued a decree that all export taxes on oil under this agreement should be paid only to revolutionary authorities.

Pan American to Build 140 Mile Ten Inch Line

Los Angeles, Calif., Jan. 22.—The Pan-American is expected to build a pipe line 140 miles in length in California during 1924 to extend from the naval reserve in Kern County to its refinery at Los Angeles. The line will be a 10 inch welded line and bring about some unusual engineering work in crossing fairly high mountains. It is planned to have the line operating before the end of the year. High officials of the company are not in Los Angeles at this time and work will likely start when they return to headquarters.

All Branches of the Petroleum Industry Bore a Share of the 1923 Market Debacle

THE grief of low prices fell about equally upon all branches of the oil industry during 1923, although for a time it looked as if the marketer had much the better of the arrangement with the gasoline consuming public as the only sure winner.

The accompanying graph shows the relative prices of average Mid-Continent crude, the price of New Navy gasoline at refinery, group 3, and an average tank wagon price based upon a figure arrived at by averaging the prices shown for the several points throughout United States. The average tank wagon price shown is not actual, of course, as it does not regard volume, but tracking the refinery price as it does, would appear fairly accurate.

The Chicago tank wagon price shown by the dotted line represents approximately one-third of the gasoline sold in the United States.

The figures are given as of the first of the months indicated.

It will be noted that the high points of crude and refinery prices for the year were reached in March, while tank wagon average reached its peak in April. The rise in refined prices early in the year seems to have been due in a way to a misjudged belief that gasoline taken from refiners during the winter had been consumed, while it developed later that much of it had merely gone into storage in the hands of the marketer. Unfavorable weather conditions during the spring season following an open winter when the consumption of motor fuel had been large, reduced consumption at a time when the refiners were optimistically filling their tanks. This condition soon led to accumulation in the hands of smaller refiners of stocks of gasoline which was forced upon the market at the buyers price, resulting in the decline which was naturally to be expected. The refinery price made an attempt to rally at the time of the seasonal increase in consumption in June, but immediately re-commensed the downward trend, which continued until the end of the year.

Meantime the tank wagon market in Standard of Indiana territory, shown basically on the chart as the Chicago market, held to the height of the consuming season, in the face of downward trend of crude and refinery prices.

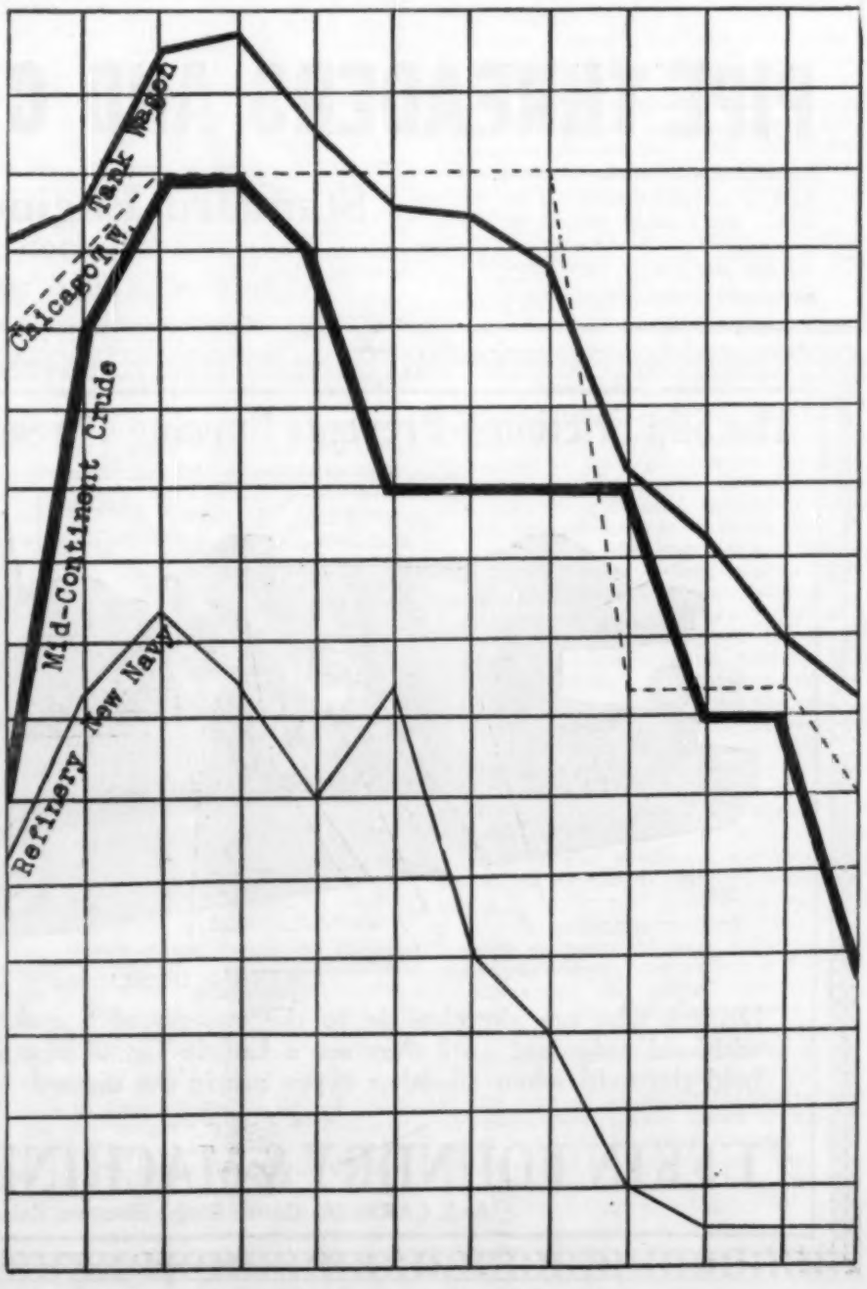
The public, keyed to expectancy by the remarkable statements made by Senator Lafollette following the notorious senate "investigation," was kept fully informed by the newspapers of the mounting output of the wells, and that substantial part of the consuming public in the Indiana territory where the increased supply was not reflected in the price, clamored for cheaper gasoline. Fuel was added by representative of the jobbers in the person of L. V. Nicholas, president of the National Petroleum Marketers Association, at whose instance a number of conferences were held in an effort to iron out the problems of the refiners, but Nicholas' insistence was that downward movement of the market structure should be at the expense of the producer of crude oil. To this the producers made answer that further reductions of the prices they received would mean absolute ruin and the loss of many small pumping wells.

So much agitation and loud talking between representatives of the several branches of the industry gave excellent opportunity for official interference, which materialized in a grand stand play by the governor of South Dakota, who sought to fix the market in his state by having the state enter the gasoline business. The Standard Oil Company in meeting this competition, cut the price 6.6 cents in August, at the height of the season, which meant that the margin of a third of the oil marketers was reduced to the vanishing point, while losses were taken on a large amount of gasoline in the jobbers tanks.

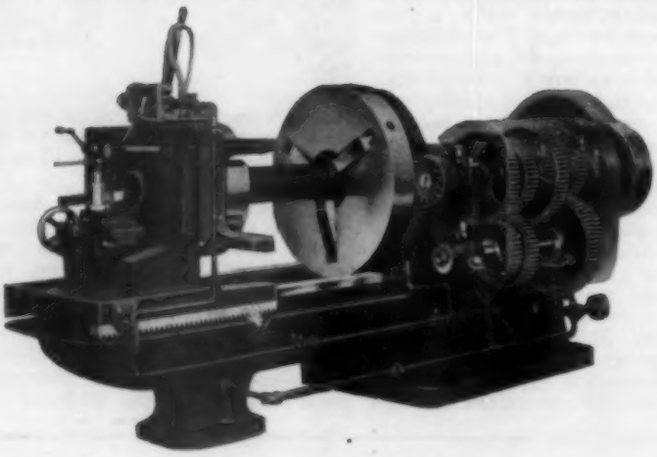
Estimates of the American Petroleum Institute show that the consumption and exports of gasoline during 1923 reached a new high figure, 175,000,000 barrels, an increase of 35,000,000 barrels, or 25 per cent over 1922, while production of gasoline was 179,000,000 barrels, an increase of 31,000,000 barrels, or 21 per cent, over 1922. These figures indicate the addition of 4,000,000 barrels to stocks during the year.

Improvement of refinery methods through the addition of pressure stills was a contributing factor to the increase in the output of gasoline during the year.

The close of the year found the gasoline market showing strength which has increased during the first days of 1924. The present refinery output is fairly well absorbed, the consumption of gasoline in automobiles being large, reflecting the increased use of that vehicle during the winter season because of the large percentage of closed models on the roads.



STANDARD WIELAND



So strong and durable are the STANDARD WIELAND PIPE THREADERS AND CUTTERS that one may almost claim they will last forever.

There are no complicated parts to confuse the operator or to become out of order. Wide chasers insure extra long threads in one cut. All gear speed changes permit the use of single speed pulleys or constant speed motors.

Made in all regular sizes up to and including 24-inch.

PIPE THREADERS AND CUTTERS

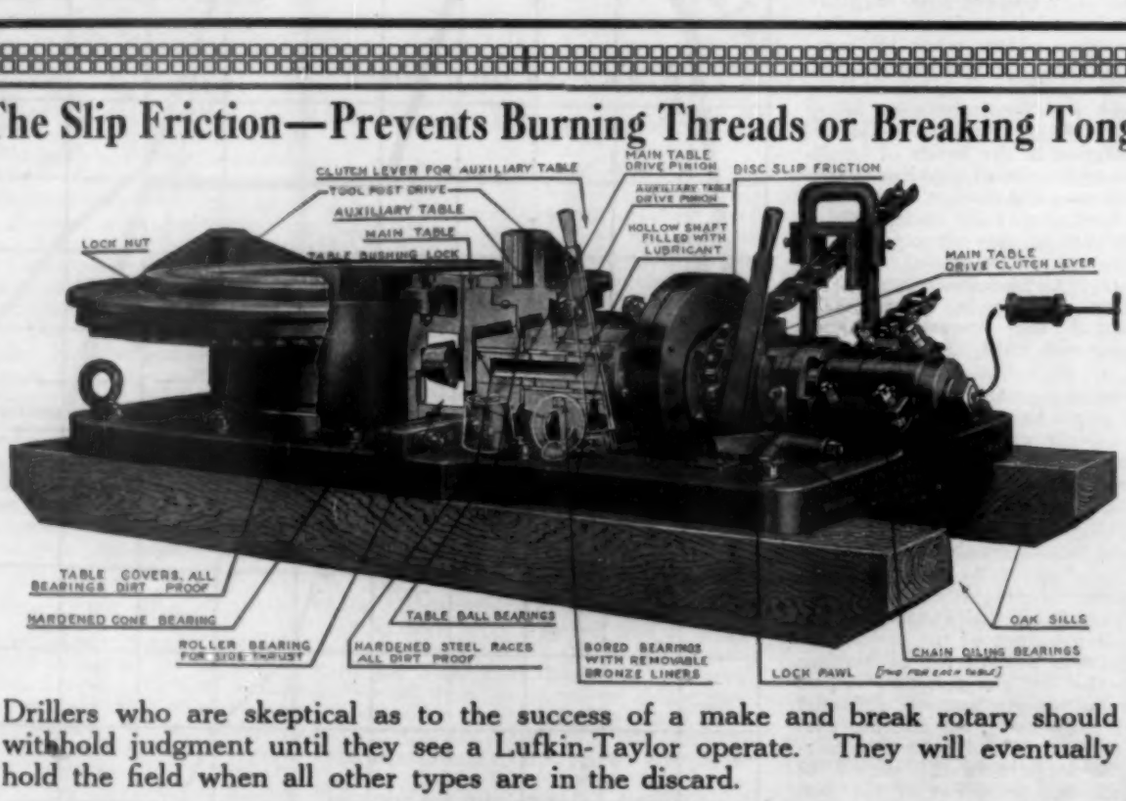
Send for our latest bulletin that describes the Standard Wieland in greater detail—at your request we will also send you our list of users.

Standard Engineering Company

ELLWOOD CITY, PENNA.

San Francisco Office: 1803 Claus-Spreckles Building

The Slip Friction—Prevents Burning Threads or Breaking Tongs



Drillers who are skeptical as to the success of a make and break rotary should withhold judgment until they see a Lufkin-Taylor operate. They will eventually hold the field when all other types are in the discard.

ASK FOR BULLETINS

LUFKIN FOUNDRY & MACHINE CO., Lufkin, Texas

A. J. CARR, 202 Carter Bldg., Houston, Sales Agent

Say you saw it in The Oil Weekly

Buying Concern as Relief to Independents

New organization formed for purpose of centralizing crude purchases in Mid-Continent

Tulsa, Okla., Jan. 23.—A move that is fraught with possibilities of far-reaching importance to independent oil producers and one that undoubtedly can exert a steadying influence on the future trend of the crude oil market is a coalition of independent crude buyers in Kansas that now is being perfected. This step in the centralization of crude buying is being watched closely by the major purchasing agencies.

Outstanding in the new movement are A. L. Derby of Wichita, president of the Derby Oil and Refining Company, and F. A. Pielsticker of Eldorado, vice president and a director of Skelly Oil Company, who have incorporated the Refiners' Oil and Pipeline Company with a capitalization of $1,000,000 and chartered under the laws of Kansas. Other incorporators include J. A. Vickers of the Vickers Petroleum Company, E. S. Rule of the Golden Rule Refining Company, and C. L. Henderson of Vickers Petroleum Company, all of Wichita and C. H. Montgomery of Eldorado of the Industrial Refining Company. The purpose of the corporation is to aid independent refiners in the purchase and transportation of crude oil.

Unified Effort

On the face of it, the Refiners' Oil and Pipeline Company represents a unified effort on the part of some of the larger independent crude buyers in Kansas to more actively compete with the major purchasing agencies, such as Prairie and Sinclair, in soliciting oil from purchasers. That there is judgment in such a move none will deny and its potentialities augurs well for the smaller refiner who, at the present time, is finding it quite a difficult task to obtain sufficient crude to operate his plant and at a price that will permit of a profit, however small. In fact, so bright does the future of the Refiners' Oil and Pipeline Company now appear that it is known on good authority that a similar move among smaller independent crude buyers in Oklahoma is being seriously considered as a way out of their present difficulties. One small refinery in southern Oklahoma within the last week has been forced to suspend operations by not being able to obtain an uninterrupted supply of crude. It is such a situation as this that gives impetus to the move to centralize crude buying.

This pooling of resources, both physical and financial, by independent buyers cannot but be felt in the crude market and if successfully carried out will prove a very important factor in the future trend of crude oil prices on the open market. One of the first and, perhaps, one of the most lasting benefits to be derived from the centralization of purchases will be the dealing of a body blow at the practice of premium paying, a practice that forever has been the bane of small refiners who are forced to compete against the larger purchasers whose stability and business integrity compensates for the difference in price between the posted quotations and the refiners' premiums. In all cases the posted price is usually below the level of premiums.

Producers, too, are interested in the welfare of the Refiners' Oil and Pipeline Company for they profess a belief that a number of centralized buying agencies scattered about the Mid-Continent and over the country will do much to relieve the present plight of the small buyer and will offer an outlet for production that would be safe and a guarantee of prompt and full payment on all accounts, a very important factor in the decision of a producer in connecting with his crude purchaser. Competition then will be keener inasmuch as the great number of small, independent buyers, scattered over the field will be brought together and their requirements met in a satisfactory manner. There is no doubt but that producers in both Kansas and Oklahoma favor such a move.

More Advances

Further advances in Mid-Continent and Eastern grades of crude oil and an increase on the West Coast are contributing towards placing the crude market in a position that will be favorable to both producer and refiner. It appears that in the Appalachian region the crude situation is becoming more acute, despite the continued advances in the open market. Pipe line companies in that section have their tankage full and have advised connections that unless producers elect to sell some of their oil at prevailing prices the carriers would be forced to reduce their runs from wells. In the same vein is the warning issued by Samuel Messer of the Pennsylvania Refiners Association who has advised producers that if they insist on holding their oil for still higher prices eastern refiners would be forced to contract for large shipments of Mid-Continent crude.

Talk of mergers is still the big topic of the day with the Standard Oil Company (Nebraska) the latest to be included in the merger of Mutual Oil and Continental Oil which is just about completed. Sapulpa Refining is understood to be included in this merger but overtures made to creditors of the company in Oklahoma and Chicago have not been favorably received which may hold up for the time being the consummation of the deal. The Ohio Oil Company, which just recently entered Oklahoma through its subsidiary, the Mid-Kansas Oil and Gas Company, also is mentioned as considering the advisability of a move such as was made by the Prairie in the absorbing of a refining and marketing interest. Ohio Oil now is engaged solely in the producing and purchasing of crude but is understood to now have under consideration an expansion program that would include the Indian Refining Company of Lawrenceville, Illinois, and possibly other refining and marketing interests. Nothing official has been forthcoming from the Ohio Oil on any of these reported deals.

A very favorable indication as to the future trend of the crude oil market is seen in the widespread demand among leaders of the producing industry to proceed cautiously and not permit the recent crude advances to stimulate drilling on too extensive a scale. Not only is this plea for conservation being preached in the Mid-Continent but it is believed in by Rocky Mountain operators who are asking companies in that section to go slowly with the coming of spring and open weather.

CONDENSED U. S. PRODUCTION

The daily average production of the fields of the United States for the past week follows:

	Barrels
California	699,000
Mid-Continent (Oklahoma, Kansas and North Texas	687,815
Oklahoma	376,340
Texas	333,950
Mountain States	144,900
Arkansas	111,205
Eastern States	108,000
Kansas	67,770
Louisiana	59,275
Total	1,900,440

Bonuses Come as Demand Exceeds Texas Output

Wichita Falls, Texas, Jan. 22.—With a demand for North Texas crude far in excess of daily production, the oil operators in Wichita and Archer Counties are being offered attractive bonuses by independent refiners above the posted price for spot oil and daily runs over a period, and unless the present policy of the crude buyers in trying to outbid each other for oil is checked a new high record for premiums is apt to be made within the next few months. The usual premium of 25 cents per barrel above the posted price on crude in normal times has already been doubled in a few instances, and offers are being made daily by refiners to contract for runs over a period with a bonus ranging from 30 to 40 cents per barrel.

Many of the producers are turning down the unusually large premiums, owing to their past experience having taught them that concerns paying the highest price for oil were the first to pass up crude payments when a change in the crude and refined market occurred. A few of the refiners are meeting with success in obtaining crude by paying a premium amounting to 10 per cent of the posted price of the oil at the time of its purchase, regardless of where the upward trend of prices soars too, but in most instances the producer and the refiner have been on friendly business terms for a long period.

CRUDE OIL PRICE QUOTATIONS FOR ALL FIELDS

Changes

Jan. 19.—Effective today the Prairie Oil and Gas Company advanced the price of Mid-Continent crudes from 15 to 25 cents. The new prices are: Below 33 gravity, $1.15; 33 to 35.9 gravity, $1.40; 35.9 gravity to 38.9 gravity, $1.60, and $1.75 for 39 gravity and above.

Jan. 19.—New prices for Mid-Continent crudes were posted today by the Magnolia Petroleum Company. They are as follows: Below 28 gravity, 75 cents; 28 to 30.9 gravity, $1.00; 31 to 32.9 gravity, $1.15; 33 to 35.9 gravity, $1.40; 36 to 38.9 gravity, $1.60; 39 gravity and above, $1.75. Corsicana heavy crude was advanced 25 cents on the same date and is now posted at 75 cents a barrel.

Jan. 19.—The Joseph Seep Purchasing Agency advanced New York Transit and Bradford District 25 cents. Prices are now posted at $4.00 per barrel. All Pennsylvania grades were advanced 25 cents to $3.50 and following a 15-cent increase Cabel and Somerset medium are posted at $1.75, Somerset light at $1.95 and Ragland 90 cents per barrel.

Jan. 21.—Effective today the Ohio Oil Company advanced the market price on Lima, Indiana, Illinois, Princeton, Plymouth, Waterloo and Wooster crudes 10 cents per barrel.

Jan. 21.—Corsicana light and Mexia crudes were advanced 20 cents by the Magnolia Petroleum Company. Both grades are now posted at $1.60 per barrel.

Jan. 21.—Following the 10-cent increase posted on January 10 the Owens Refining Company has advanced the price of Rockdale-Minerva crude 25 cents, making the new price $1.35 per barrel.

Jan. 21.—Effective today the Ohio Oil Company advanced the price of Elk Basin, Grass Creek light and Lance Creek crudes 15 cents. Rock Creek was advanced 20 cents and Big Muddy 25 cents per barrel.

Jan 21.—All grades of Louisiana and Arkansas crudes were advanced 15 cents today by the Standard Oil Company of Louisiana. The increase was met by the Atlantic Oil Producing Company, the Gulf Production Company and The Texas Company.

Jan. 22.—Effective today all grades of California crude were advanced 25 cents by the Standard Oil Company (California).

Jan. 22.—Effective today the Midwest Refining Company advanced the price of Salt Creek crude 20 cents.

Current Postings

EASTERN STATES

	Jan. 26 1924	Jan. 27 1923
New York Transit	$4.00	$ ...
Bradford (Pa.)	4.00	...
Other Pennsylvania grades	3.50	3.45
Cabel	1.75	2.31
Ragland	.90	1.10
Corning	1.65	2.00
*Somerset, heavy	1.75	2.10
*Somerset, light	1.90	2.35

*Six cents above posted price since October 1, 1922.

CENTRAL STATES

Illinois	$1.72	$1.98
Indiana	1.73	1.98
North Lima	1.93	2.18
South Lima	1.93	2.18
Plymouth	1.10	1.35
Lodi	1.50	...
Princeton	1.72	1.98
Waterloo	1.20	1.45
Wooster	1.80	2.10
Western Kentucky	1.20	1.65

MID-CONTINENT

(Prairie prices posted 1-19-24)

Below 33 gravity	$1.15	$ ...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

(Magnolia prices posted 1-19-24)

Below 28 gravity	$ .75	$ ...
28 to 30.9 gravity	1.00	...
31 to 32.9 gravity	1.15	...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

(Humble Oil & Refining Company's Prices posted 12-27-23)

39 gravity and above	$1.40	...
36 to 38.9 gravity	1.30	...
33 to 35.9 gravity	1.15	...
30 to 32.9 gravity	1 00	...
Below 30 gravity	.90	...

Texas Company's prices posted 1-10-24)

39 gravity and above	$1.50	...
36 to 38.9 gravity	1.40	...
33 to 35.9 gravity	1.25	...
Below 33 gravity	1.00	...

NORTH CENTRAL TEXAS

Corsicana (light) (Magnolia)	$1.60	$ ...
Corsicana (light) (other companies)	1.40	...
Corsicana (heavy)	.75	...
Thrall	1.00	...
Mexia	1.60	...
Currie	1.75	...
Rockdale-Minerva	1.35	1.50

SOUTH TEXAS

Mirando	.75	...

SOMERSET

	Jan. 26 1924	Jan. 27 1923
Below 33 gravity	$1.15	$ ...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

GULF COAST

All grades except Grade B at Blue Ridge and Pierce Junction	1.50	1.25
Blue Ridge (Grade B)	1.15	.80
Pierce Junction (Grade B)	1.15	.80

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	$1.50	$ ...
35 to 37.9 gravity	1.40	...
32 to 34.9 gravity	1.30	...
Below 32 gravity	1.15	...

Homer

35 gravity and above	1.50	...
33 to 34.9 gravity	1.40	...
31 to 32.9 gravity	1.30	...
Below 31 gravity	1.15	...

Haynesville

33 gravity and above	1.40	...
Below 33 gravity	1.30	...

Bull Bayou

38 gravity and above	1.45	1.50
35 to 37.9 gravity	1.30	1.40
32 to 34.9 gravity	1.15	1.35
De Soto crude	1.50	1.70
Crichton	1.30	1.35
Bellevue	1.30	.85
Jennings	1.65	1.25
Vinton	1.65	1.25
Edgerly crude	1.65	1.25

Smackover

26 gravity and above	1.15	...
25 to 25.9 gravity	1.00	...
24 to 24.9 gravity	.90	...
Below 24 gravity	.80	...

El Dorado

33 gravity and above	1.50	...
Below 33 gravity	1.40	...
El Dorado East Field (Calion)	.80	...

Stephens District

(Atlantic)

(Posted by Atlantic Oil Company 1.10-24)

28 gravity and above 60 degrees	$1.20	$ ...
26 to 27.9 gravity at 60 degrees	1.15	...
23 to 25.9 gravity at 60 degrees	1.00	...
Below 23 gravity at 60 degrees	.80	...

WYOMING-MONTANA

Wyoming

(Posted 1-21-24)

Elk Basin	$1.55	$1.70
Grass Creek	1.55	1.70
Rock Creek	1.30	1.35
Lance Creek	1.50	1.70
Mule Creek	.70	1.10
Big Muddy	1.10	1.25
Salt Creek	1.20	1.25
Osage	1.35	1.70
Hamilton Dome	1.40	...
Pilot Butte	1.10	....
Landers	1.10	.90
Torchlight-Greybull	1.40	...

Montana

Sunburst	.70	...
Cat Creek	1.40	1.70

CALIFORNIA

(Crude Oil Prices at the Well 1-22-24)

Los Angeles and Orange Counties

14 to 19.9 gravity	.85	.60
20 to 20.9 gravity	.86	.62
21 to 21.9 gravity	.87	.65
22 to 22.9 gravity	.88	.70
23 to 23.9 gravity	.89	.75
24 to 24.9 gravity	.90	.80
25 to 25.9 gravity	.91	.85
26 to 26.9 gravity	.92	.90
27 to 27.9 gravity	.93	.95
28 to 28.9 gravity	.94	1.00
29 to 29.9 gravity	.95	1.05
30 to 30.9 gravity	.96	1.11
31 to 31.9 gravity	.97	1.17
32 to 32.9 gravity	.98	1.24
33 to 33.9 gravity	.99	1.31
34 to 34.9 gravity	1.00	1.38
35 gravity and above	1.01	1.45

CANADIAN CRUDE

*Petrolia	2.03	2.38
*Oil Springs	2.25	2.45

*Plus 52½ cents bounty.

GEOLOGICAL MAPS
TEXAS
ARKANSAS
NEW MEXICO
OKLAHOMA
BLUE PRINTING-PHOTOSTATS
COUNTY MAPS-ROAD MAPS
WRITE FOR CATALOGUE

Standard BLUE PRINT MAP AND ENGINEERING CO.
515 MAIN ST. FORT WORTH, TEXAS.
614 SO SPRING ST. LOS ANGELES CALIF

OIL FIELD MAPS
TEXAS
ARKANSAS
LOUISIANA
OKLAHOMA
CALIFORNIA
SPECIAL DRAFTING

FOR SALE

One Jarecki Pipe Machine. Capacity 2½ to 12¾" inclusive. In good condition and equipped with dies for all sizes of pipe.

50,000 feet 4-inch Used Line Pipe
20,000 feet 6-inch Used Line Pipe
25,000 feet 8-inch Used Line Pipe

For immediate shipment from our Texas yards.

KEYSTONE PIPE & SUPPLY COMPANY
314-315 W. T. Waggoner Bldg., Phone Lamar 3640, FORT WORTH, TEXAS
Branch Stores: Wichita Falls, Graham, Breckenridge

SINCLAIR'S SIGN of SERVICE SATISFACTION and SECURITY

The Stripes Signify

1. Large crude oil reserve.
   (Through affiliated Companies)
2. Modern refineries.
3. Petroleum products for general industrial demands.
4. Facilities for prompt domestic and foreign shipments.
5. Fair prices all the time.
6. Merchandise and service guaranteed.
7. Personnel proficiency in oil operations.

SINCLAIR REFINING COMPANY

New York, Sinclair Oil Bldg., 45 Nassau St.
Chicago, 111 W. Washington St.
Cable Address: "Lucent"

It's a Comfort

After a long day's grind to recline comfortably with your regular weekly copy of The OIL WEEKLY. And the pleasure you get from reading it is not the only consideration, for it contains articles that will make you of more value to your company or your industry.

Below is a ticket for 52 issues of the only oil journal devoted exclusively to you and your problems, and the cost is only

$1.00 PER YEAR

Less than 2 cents per week

MAIL IT NOW!

THE OIL WEEKLY

P. O. Box 1307 Houston, Texas

Enter my name for one year's subscription to The OIL WEEKLY, for which you will find enclosed check for $1, as payment in full.

Name.....

Street and No.....

City and State.....

Please check below branch of industry engaged in:

Producing Executive ◇ Field Man ◇ Pipe Line ◇

(BE SURE TO CHECK CLASSIFICATION, otherwise we will have to hold up entering your subscription until we can get the information from you.) 1-26-24

Effect of Improved Technique on Industry

Better field methods, more scientific development and closer organization play big part

By Joseph E. Pogue
*Consulting Engineer, New York City**

IF THE production of crude petroleum in the United States by years from 1907 to 1922 be plotted on semi-logarithmic paper, so that the rate of change is readily visualized, it may be observed that the rate of increase shifted in 1919 from a remarkably even increase of 7.1 per cent to a steeper and less even gradient representing an average annual increase of 16.6 per cent. (See Fig. 1.)

These facts may be demonstrated mathematically by fitting a compound interest curve to the two sets of data, as shown in Tables 1 and 2.

TABLE 1
Rate of Increase in Crude Oil Production in the United States, 1907-1919, Determined by Fitting a Compound Interest Curve (y=248.8x1.071x, origin at 1913) To the Data by the Method of Least Squares.
(Data from U. S. Geological Survey)

Year—	Actual Production Barrels	*Calculated Production Barrels
1907	166,000,000	165,000,000
1908	179,000,000	176,000,000
1909	183,000,000	189,000,000
1910	210,000,000	202,000,000
1911	220,000,000	217,000,000
1912	223,000,000	233,000,000
1913	248,000,000	249,000,000
1914	266,000,000	267,000,000
1915	281,000,000	286,000,000
1916	301,000,000	306,000,000
1917	335,000,000	328,000,000
1918	356,000,000	351,000,000
1919	378,000,000	376,000,000

*Standard deviation of calculated from actual values equals 5,170,000 barrels.

TABLE 2
Rate of Increase in Crude Oil Production in the United States, 1919-1923, Determined by Fitting a Compound Interest Curve (y=502.1x1.166x., at 1921) To the Data by This Method of Least Squares
(Data from U. S. Geological Survey)

Year—	Actual Production Barrels	†Calculated Production Barrels
1919	378,000,000	369,000,000
1920	443,000,000	431,000,000
1921	472,000,000	502,000,000
1922	558,000,000	586,000,000
1923	*726,000,000	683,000,000

*Last three months estimated.
†Standard deviation of calculated from actual values equals 27,400,000 barrels.

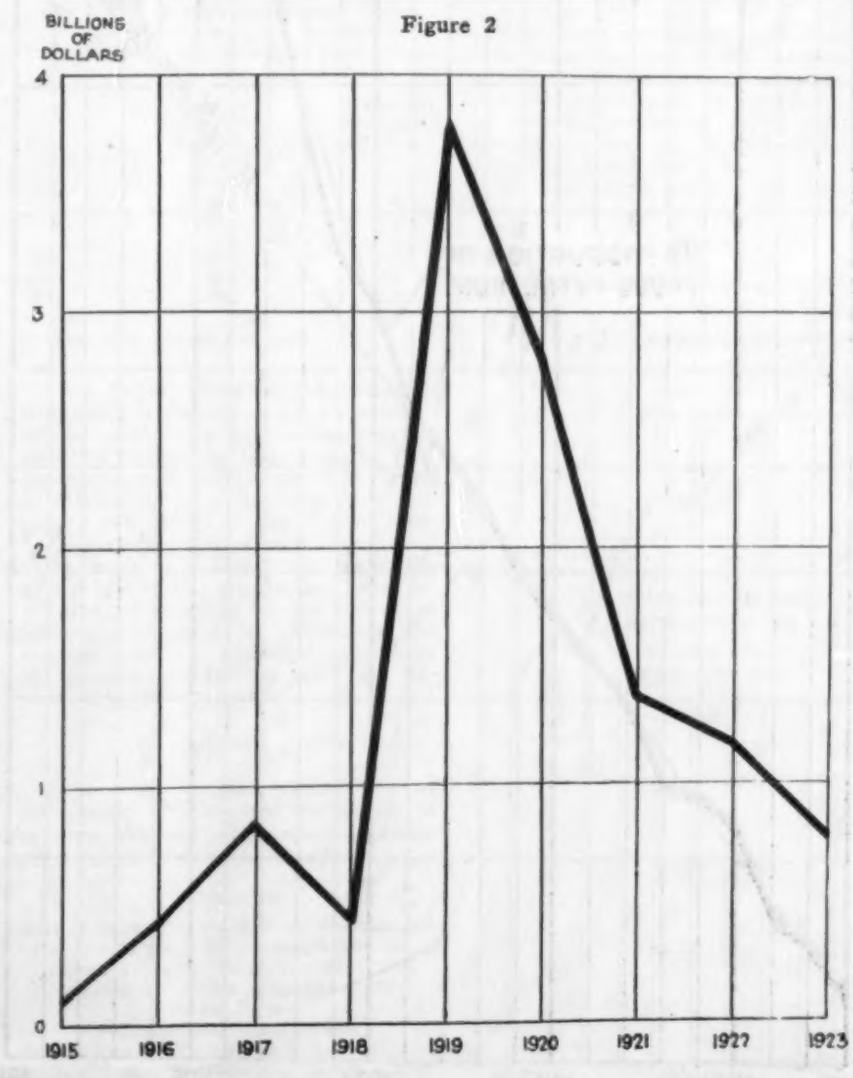
That the production of crude petroleum should increase geometrically rather than arithmetically, is not surprising in view of the competitive conditions under which this product is produced whereby development goes forward in ever widening circles.[1] But that the rate of increase should display a definite alteration in 1919 to a higher rate which has thereafter been maintained, calls for explanation; a new factor must have come into action. To account for this change we offer the theory developed below.

During the war period the supply of crude petroleum was out-distanced by increasing requirements and stocks of crude petroleum were drawn upon almost continuously from late 1915 to the end of 1918.[2] As a result, the idea gained ground that the petroleum resource of the United States was quite limited in size; estimates of the unmined reserve were made by geologists and widely published to the effect that the ultimate production of the country would be of the order of magnitude of 11 billion barrels; and in general the conviction grew that the United States was facing an early shortage of oil and would soon became dependent upon foreign source of supply. The shortage-idea reached an active and aggressive stage by 1919, a year which culminated in a sectacular rise in the value of oil securities and was followed in turn during 1920 by a notable advance in the prices of crude petroleum and its derivatives.

The years 1919 and 1920 were marked by an exceptional flow of new capital into the petroleum industry. Adequate statistics are lacking to measure the absolute amount of new capital so attracted, but an index of the relative importance of this factor is afforded by the figures representing the new incorporations of oil and gas companies as reported by the New York Journal of Commerce. These data are shown in graphic form in Fig. 2, where the significance of 1919 and 1920 in the respect specified is clearly apparent.

Between 1919 and the present there has been a notable advance in the technique of oil-finding and oil-production. This advance has been in the direction of speeding the finding and exploitation of new oil-pools, and as it is now well known to petroleum engineers that rapid drilling is conducive to a more complete extraction of oil[3], this accel-

Figure 2



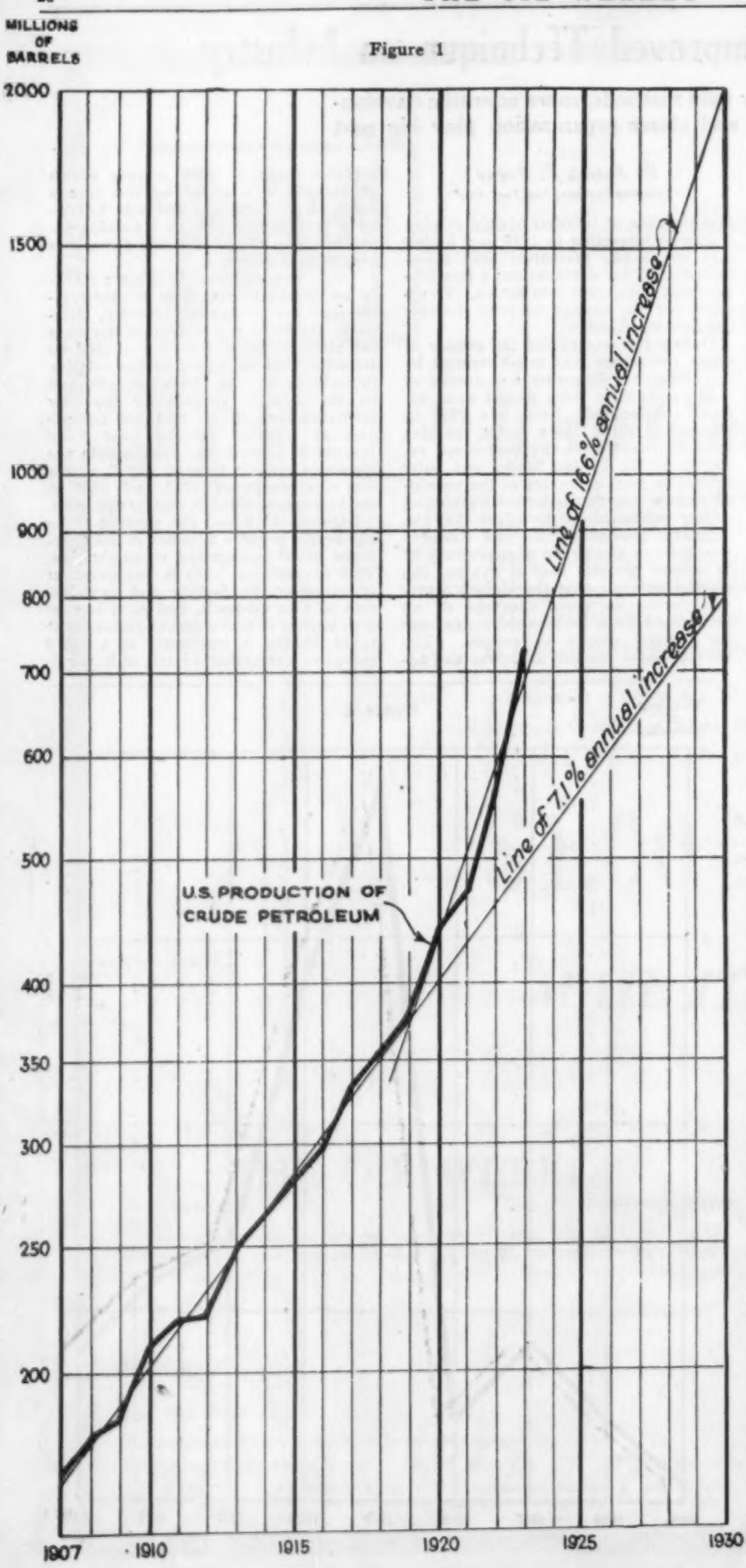
*A paper presented before the American Statistical Association in Washington, December 28, 1923.

[1]See Pogue, The Economics of Petroleum, 1921, pp. 31-34.

[2]In this study, imports and exports of crude petroleum were left out of consideration in order to simplify the presentation of results. Their inclusion would have complicated the argument, but would not have changed the principles involved or conclusions reached.

[3]For a good summary of the evidence on this point, see G. C. Gester, S. H. Gester, and E. W. Wagy, Oil and Gas Conservation, Standard Oil Bulletin, San Francisco, December, 1923, pp. 2-4.

Figure 1



eration of exploitation has not had the primary effect of increasing production directly but the secondary effect of enlarging the percentage of recovery as well. That production has been facilitated during the past three years by better methods is demonstrated by the well data presented in Table 3, which shows that production has been increased not primarily by drilling more wells (the rate of drilling since 1919 is not materially higher than for the period 1913-1918) but through the agency of wells of larger average yield. The rate of crude oil production has been doubled with no substantial increase in the volume of drilling—better, faster, and deeper drilling are responsible.

TABLE III

Well Data Covering the Oil Fields of the United States (Exclusive of California) By Years, 1913-1923.

(Data from Oil and Gas Journal)

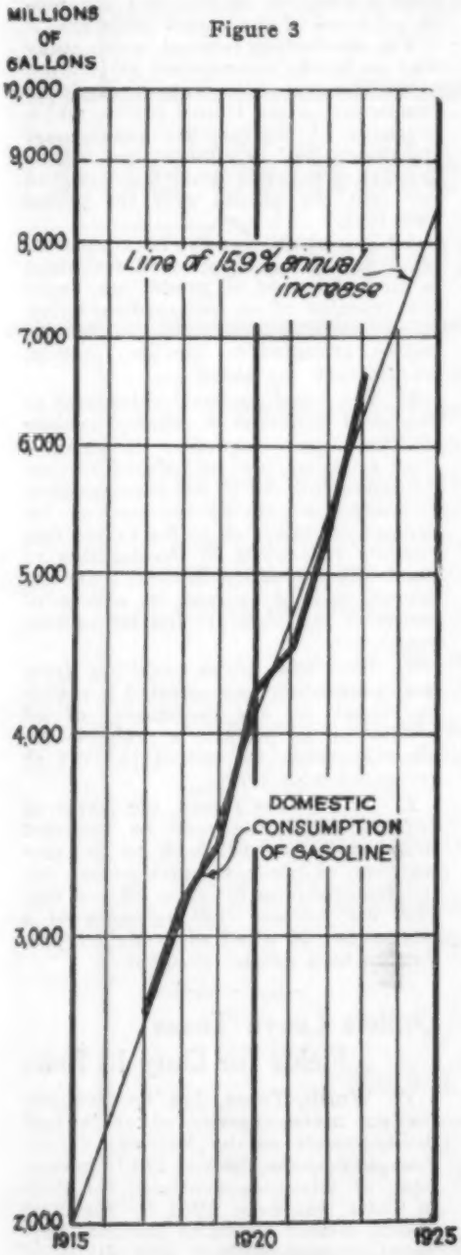
Year	Number of oil wells completed.	Total initial daily production thousands of barrels	Average initial daily production per well Barrels.
1913	18,824	781	42
1914	16,140	1471	91
1915	8,892	1715	193
1916	18,080	1497	83
1917	15,673	1383	88
1918	16,698	1486	88
1919	20,686	3366	163
1920	23,738	3339	141
1921	13,943	2648	189
1922	16,201	3912	241
1923*	14,548	4440	305

*11 months.

To the oil producer or petroleum engineer the items of progress in oil-field technique are well known. Lack of space forbids but a bare enumeration of them here. These items include: the advancement and wider application of the science of geology; the improvement and broader use of the methods of rotary drilling, including the development of coring technique in advance of the drill; the wider employment of diamond drilling in exploration of oil well machinery, permitting faster and deeper drilling; the employment of bonuses, better organization, and other superior managerial methods in gaining greater speed and efficiency from the human factor; and more rapid transportation of oil field supplies through the use of the motor truck.

That these conditions have had a notable effect upon oil production may be demonstrated further by the bunching of major oil-pools in the past five years, and particularly in 1923. During the development of the American petroleum industry over the past 60 years there have been only 11 oil-pools which have attained a maximum rate of output exceeding 100,000 barrels per day. And of these 11 major pools, two reached their maximum in 1914-1915, one attained its peak in 1921, and eight reached their peaks in 1923! Of the eight pools peaking in 1923, one was discovered early in that year, one was discovered in 1922, four were discovered in 1921, one was discovered in 1920, one in 1919, and

Figure 3



one in 1912. In other words, seven of the eleven major oil pools were found in the past five years. This bunching of large pools supported the increased acceleration of production shown in Fig. 1.

The theory is therefore offered that the shortage idea, attracting new capital to the industry in large amounts through its speculative implications, stimulated new technique and the broader application of old technique to the degree that the rate of crude oil production was increased from 7.1 per cent per annum to 16.6 per cent per annum. The importance of this new factor may be expressed by the equation:

$$a=1.088$$

derived by taking the difference between the equation of the two straight lines in Fig. 1 as expressed in the logarithmic form and converting this difference into its antilog. This derived equation means that crude oil production, over the period 1919-1923 has been accelerated 8.8 per cent per annum over its normal rate by the sequence: shortage idea, new capital, improved technique.

The result of increasing the rate of domestic crude oil production from 7.1 per cent per annum to 16.6 per cent per annum has been an almost unbroken period of over production lasting from the middle of 1920 to the end of 1923. Oil has been found faster than it could be consumed.

The rate of growth of the consumption of the crude oil is controlled by the rate of growth of the market for gasoline. The domestic consumption of gasoline from 1917 to 1923 (the period over which annual statistics are available) has increased at the average annual rate of 15.9 per cent. (See Fig. 3 and Table 4.) This rate is only slightly less than the 16.6 per cent annual increase which has characterized the production of crude petroleum since 1919, and the difference would not have given rise to serious overproduction had there not been another factor, the increasing extraction of gasoline from crude petroleum as the result of progress in chemical engineering.

TABLE IV

Rate of Increase in Gasoline Consumption in the United States, 1917-1923, Determined by Fitting a Compound Interest Curve
(y=4111x1.159x, origin at 1920)
To the Data by the Method of Least Squares
(Data from U. S. Bureau of Mines)

Year	Actual Consumption Mill. Gals.	Calculated Consumption Mill. Gals.
1917	2695	2641
1918	3123	3061
1919	3438	3547
1920	4256	4111
1921	4516	4765
1922	5382	5523
1923	6700*	6402

*Last three months estimated.

This factor, likewise the result of improved technique, may be measured by computing the ratio between gasoline production and crude oil consumption and determining the trend of this ratio. The results of this procedure are shown in Fig. 4 and Table 5. It may there be seen that improved technology in refining has, over the period 1919-1923, accelerated the extraction of gasoline to the extent of 5.4 per cent per year. Therefore the economic force of chemical technology in gasoline production may be expressed by the formula:

$$a=1.054$$

As a result of the interposition of the factor of improved technique in refining, the rate of increase in crude oil requirements has been reduced from

TABLE V

Rate of Increase in the Ratio of Gasoline Production to Crude Oil Consumption in the United States by Years, 1917-1923, Determined by Fitting a Compound Interest Curve
(y=22.2x1.054x., origin at 1920)
To the Data by the Method of Least Squares
(Data from U. S. Geological Survey and U. S. Bureau of Mines.)

Year	Gasoline Production Mill. Bbls.	Crude Oil Consumption Mill. Bbls.	Actual Ratio Per cent	Calculated Ratio Per cent
1917	67.9	378.3	17.9	19.0
1918	85.0	412.3	20.6	20.0
1919	94.2	420.5	22.4	21.1
1920	116.4	530.5	22.0	22.2
1921	122.8	526.0	23.4	23.4
1922	145.2	592.4	24.6	24.7
1923*	133.9	523.6	25.6	26.0

*Nine months.

TABLE VI

Rate of increase in the Consumption of Crude Petroleum in the United States by Years, 1917-1923, Determined by Fitting a Compound Interest Curve
(y=500x1.08x., origin at 1920)
To the Data by the Method of Least Squares
(Data from U. S. Geological Survey)

Year	Actual Consumption Million Bbls.	Calculated Consumption Million Bbls.
1917	378	367
1918	412	407
1919	421	451
1920	531	500
1921	525	554
1922	592	614
1923	719*	680

*Last two months estimated.

15.9 per cent per annum, which would have been the rate if the recovery of gasoline had remained static, to 10.8 per cent per annum, the average rate of increase on actual crude oil consumption over the period 1917-1923. (See Fig. 5 and Table 6.)

By subtracting the rate of crude oil

Figure 4

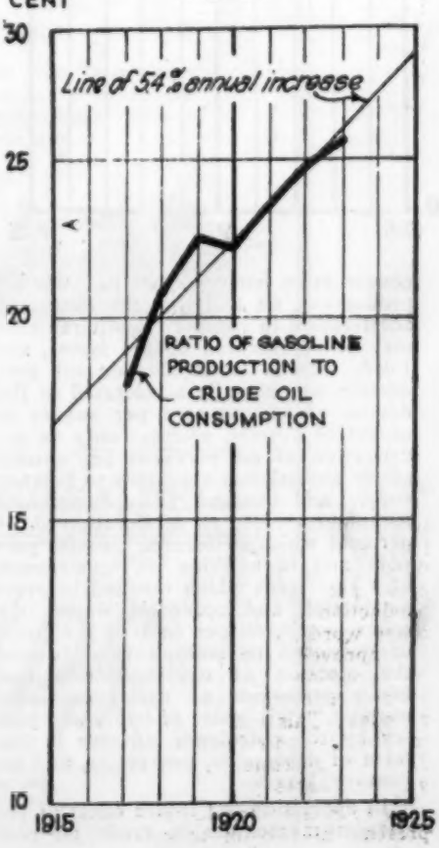
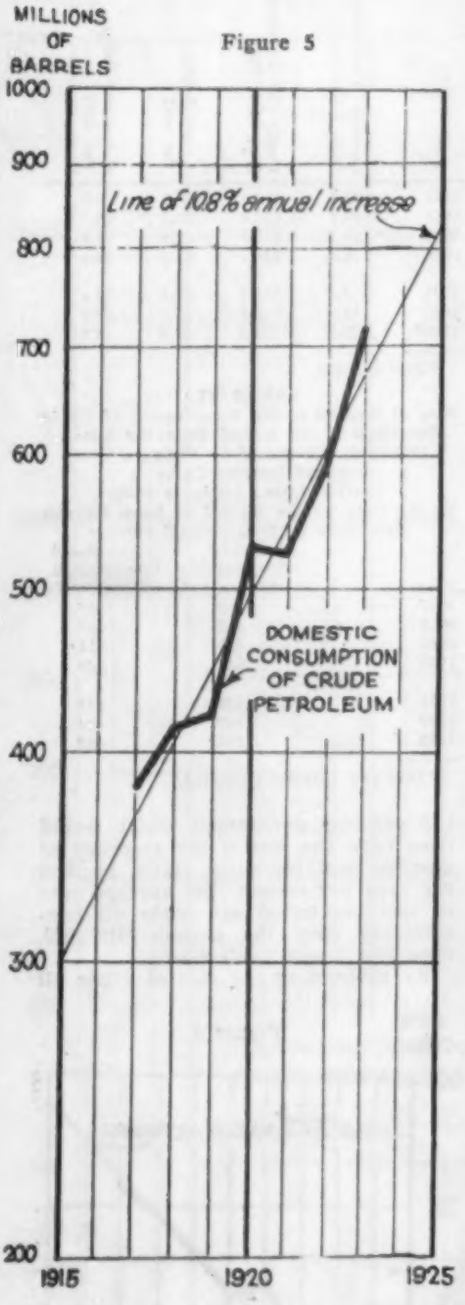


Figure 5



consumption from the rate of crude oil production, we find that the excess of acceleration in respect to requirements may be represented by the factor, a= 1.052; that is to say, crude oil production was actually accelerated to the degree of 8.8 per cent per annum in excess of normal, whereas only on acceleration of 3.4 per cent per annum above normal was necessary to balance supply and demand. Thus, improved technique created an acceleration of 3.4 per cent which performed a useful purpose and in addition an acceleration of 5.2 per cent which resulted in overproduction and economic waste. In other words, 60 per cent of the force of improved technology went toward the creation of overproduction and hence performed no useful economic purpose. This waste of effort was paid for by the petroleum industry in the form of depression, low prices, and inventory losses.

In appraising the future effect of the present momentum in crude oil production, we have to consider the counter economic forces set up by a condition of overproduction and the possible entrance of a new factor, the resource limitation.

Overproduction, creating low prices, tends to accelerate demand and supply. Consumption of oil has been increased as a result of oversupply, while at the same time drilling and exploration have been slowed down, part of the capital in the industry destroyed, and the vitality of the shortage idea lessened. These conditions alone are making for equilibrium between supply and demand, at least for a period; but the power of improved technology is left unimpaired, even though the motive force behind it is weakened. Thus with revival of the motive force, other things being equal, the factor of technique stands ready to report its recent performance.

A new factor, however, must be taken into consideration. Petroleum is a wasting asset; individual oil fields become quickly depleted; and new pools must be brought in in ever increasing numbers, if given rates of increase in production are to be maintained. The limiting factor of resource also comes into the equation.

Several estimates of the size of the unmined reserve of petroleum have been made by authoritative bodies of geologists. These estimates agree in placing the ultimate supply of recoverable oil at a figure of the order of magnitude of 11 billion barrels, of which over 6 billion barrels have been extracted to date. While these estimates have probably substantially underestimated the unknown possibilities of the country, they nevertheless emphasize the presence of a resource limitation which sooner or later must affect the rate of production. Just as the production of each pool increases, reaches a maximum, and subsequently declines, tracing a course resembling a frequency distribution skewed to the right; so the output of the entire country, being merely a composite of individual pools, may be expected to follow a similar course, but with the skewing perhaps accentuated by further development of technology.

Reverting to figure 1, one may ask whether the production curve will follow its recent course into 1924 and thereafter. As to 1924, it may be answered with considerable confidence that the momentum of oil production has received sufficient check to assure an output for 1924 that will represent no increase over 1923 and probably an actual decrease. As to 1925 and later, the answer is not so definite; but unless the factor of resource limitation becomes effective, a sufficient advance in price would doubtless renew a 16.6 per cent impetus. But from a study of the petroleum resource and from discussions of the matter with many geologists, petroleum engineers, and oil producers, the writer ventures the opinion that the factor of resource limitation will begin to retard the momentum of oil production in the United States in the near future and that 1924 will witness a change in the trend of crude oil production such that the production curve as shown in figure 1 will assume a gradient less steep than has characterized the past five years—a gradient that may ultimately, possibly in five to 10 years, cause the curve of total production to intersect the projected trend of the period 1907-1919.

The conclusions reached in this study may be briefly summarized as follows:

1. The rate of increase in crude oil production in the United States, which averaged 7.1 per cent per annum over the period 1907-1919, underwent an acceleration to an average rate of 16.6 per cent per annum over the period 1919-1923.

2. This sharp increase in momentum was the result of improved technique in oil finding and oil production, under the stimulus of an extraordinary flow of new capital into the petroleum industry, attracted by the idea that an oil shortage lay ahead.

3. The simultaneous development of improved technique in refining, leading to the larger extraction of gasoline from crude oil, also stimulated by capital inflow induced by the shortage idea, retarded the rate of increase of the demand for crude oil to the extent that roughly two-thirds of the impetus of crude oil production derived from improved technology was in excess of economic requirements and led to over production.

4. The low prices resulting from over production have created a sufficient check on the mementum of oil production to promise a probable decline in crude oil output in 1924 as compared with 1923.

5. In the near future, the factor of resource limitation may be expected to create a further check on the momentum of crude oil production, and the tentative conclusion is offered that 1924 will witness the beginning of a change in the trend of crude oil production to a gentler gradient.

Drillers Leave Texas Fields for Duty in India

Ft. Worth, Texas, Jan. 8.—Requests for six more experienced cable tool drillers made to the National Supply Company by the Burmah Oil Company, Ltd., of Glasgow, Scotland, for duty in India, has been filled by the Fort Worth district offices of National Supply Company without any difficulty, owing to a great number of drillers desiring a taste of foreign service. Joseph Burt of Desdemona, Leslie E. Brummage of Cisco, and L. K. Smith of Ranger will depart about January 15 for New York to board ship for Rangoon, India. A few weeks ago Kuhn Calvert of Breckenridge, and R. J. Lowden and Harry H. Bartlett, both of Fort Worth, left for India. Early last fall 25 cable tools drillers for the Burmah Oil Company, and a similar quota for the Anglo-Persian Oil Company, Ltd., of London, for duty in Persia, were furnished by the National Supply Company.

J. Edgar Pew, vice president of The Sun Company and western manager, Dallas headquarters, is spending a few days in California, occasionally watching Sun tankers move in and out of San Pedro harbor. He is accompanied by Mr. Maxwell, of the land department, the visit being principally recreational. Mr. Pew said the company has two wells in Venezuela about ready to drill in, on a block he took over a year ago when he visited that country.

The Simple Principle That Means Greater Pump Efficiency

Years before the Gaso line of oil-industry pumps appeared, their designers were in the field repairing oil field machinery, learning from actual experience in what respects pumps were failing to meet the requirements of operating conditions.

They came to the conclusion that the Oil Industry needed STURDIER pumps, especially designed for it, by men acquainted in detail with its operating conditions.

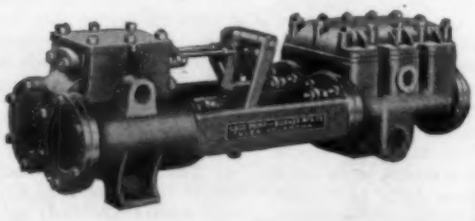
Out of their conviction grew the present line of Gaso Oil Industry Pumps. A basic principle of design lies back of every Gaso—the principle of FEWER, STRONGER parts. Every Gaso Pump, furthermore, is strictly an Oil Industry pump, embodying important variations from ordinary pumps of its type.

Gaso Pumps are built in the world's "Oil Capital", Tulsa, by Oil Men, for Oil Industry Use. In a day of "specialization" can you doubt that they will serve you better than pumps which are not the result of such narrow specialization? Such leaders as Prairie, Sinclair, Cosden, are among our customers. There is a reason.

We will gladly send you full description and specifications on any item in the complete Gaso line.

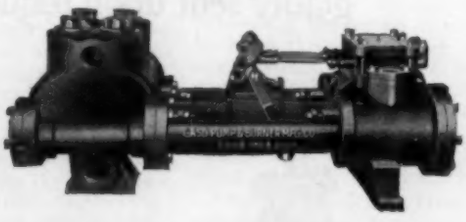
No. 401

For pressures ranging from 200 to 800 pounds. Capable of doing the work usually performed by much more expensive pumps.



No. 407

Duplex Piston Steam Pump for pressures from 600 to 1000 pounds. Of heavy extra-service construction throughout. Made in various sizes and capacities.



GASO PUMP & BURNER MFG. CO. TULSA, OKLA.

GASO PUMPS

for oil field uses

Say you saw it in The Oil Weekly

An Unusual Assertion

Each and Every Darling Gate Valve of every size and type is tested for rate of pressure and inspected for flaws.

BECAUSE this factory condition is unusual we are bringing it to the attention of Oil and Gas operators and Refiners.

Darling Gate Valves, in line with our policy of producing only the best in material and workmanship, must pass through six distinct inspections in the course of manufacture. There could be no greater effort than this expended to insure Darling Valves reaching you in perfect condition and living up to our claim of superiority

Details of construction as well as catalog will be gladly sent upon request.

DARLING

DARLING VALVE & MANUFACTURING CO.

WILLIAMSPORT, PENNA.

NEW YORK CHICAGO

OKLAHOMA CITY HOUSTON

Influences Related to Use of Cement in Wells

In which is discussed the elements to be overcome in use of cement in shutting off water

By Llewellyn T. Bachman
(Directing Chemist, Santa Cruz Portland Cement Company, Davenport, California)

INCIDENT to the importance for protecting oil wells against the infiltration of water, this subject, like many others pertaining to the development of oil, has deservedly received a wide range of attention; and doubtlessly will present many more everchanging problems so long as the development of oil is confined to oil wells.

Admitting that the development of oil is an expensive and hazardous undertaking, that part relating to the exclusion of water, whether its ingress is from above, below, or through the oil sands in wells with conditions at variance with each other, in proven or unproved fields, is known to contribute its full share of ill-defined contingencies which immediately influence the productivity or life of an oil well.

In the purpose of this writing no effort is made toward describing the several cementing processes in practice, nor the advantages or disadvantages in the use of mud or mud-laden fluid for shutting off water; rather an expression of what cements can and will do and what they will not do under varying conditions, and what precautions might be wisely observed in their use for minimizing the percentages of cementing failures.

Experience dictates the use of Portland Cement as having properties essentially more valuable as a cementing material than any other known material for shutting off water.

Portland Cement

Portland cement is defined as a product obtained by finely pulverizing clinker produced by calcining to incipient fusion an intimate and properly proportioned mixture of argilaceous and calcarious materials with no additions subsequent to calcination other than calcined or uncalcined gypsum.

The separate procedures in the process of manufacture, not being conducted equally through nor with like understanding by all manufacturers, effect a wide variation in the resultant product which must be governed and guided by some form of standardization as to quality.

The standard requirements affecting the separate values in all Portland cements are set forth in a series of specifications issued by the "American Society for Testing Materials" whose headquarters are located at 1315 Spruce street, Philadelphia, Pennsylvania, where printed copies may be obtained by application.

Although the limiting values are specifically defined in the Standard requirements, they exercise no jurisdiction over the degree of quality variation in cements made at any particular plant nor over the quality difference between cements made in any number of plants as long as Standard requirements are complied with. Whether the manufacturer is concerned merely in the manufacture of such a product as will just fall inside the specified limits or give his entire attention to producing the very best for the oil field service, resolves itself into a matter of economy and ethics. A little attention to the matter of quality will readily disclose a difference between brands as well as variations in the individual brands.

Essential Elements

The essential elements in Portland cement are silica, iron, alumina ,and lime, which, when calcined to incipient fusion unite to form double complex compounds; and when ground and mixed with water possess a hydraulic property which derives its name from its ability for setting and hardening under water.

The setting period is designated by its initial and final stages extending through a period of a few hours only; but the hardening period, beginning at the termination of the final stage of setting, continues almost indefinitely in both degree and activity. While the setting stages are manifestly important ones in that through this order the hardening process takes momentum, it is the latter property, by density of mass and strength, which defines its powers for resistance as a water seal.

The activity of this property governs the time allowance in which the cement is expected to complete its satisfactory performance; but is also itself governed by many influences both in and out of the well which may or may not, as the case may be, rest within the power of control.

Conditions Affecting Cement

Some of the influences affecting this hardening property, the relative density if its mass and its conduciveness to live action may be directly traceable to manufacturer, dealer, and consumer alike; whether from causes under limitable control or negligently imposed, the result is reflected not only in the productivity and life of the oil well but also in the excessive expenditure of capital.

That manufacturer of cement who, in sacrificial haste for economy, with an insecure or unfitted organization carelessly neglects his ceaseless watchfulness over materials during the progressive stages of manufacture, markets a product both good and bad with considerable irregularity or substitutes for deception, criminally inflicts an irrecoverable loss to the service.

That dealer who gives inadequate attention to the warehousing of his cement for the preservation of its properties, whether through ignorance, negligence, substitution or economy, or from a self-imposed conviction that it is an abuse-proof material, violates all sense of responsibility to the detriment of oil development.

That consumer or operator, who makes his purchase without discretion and stores his cement under all manner of conditions affected by atmospheric agencies, or ignorantly and unwisely adheres to the prevailing crude and unreliable custom, and without the use of the simple inexpensive suitable equipment for testing his cements before use, which relies upon slurrifying cements irrespective of cement and water content, stirred to almost complete separation of its finest from the coarser particles, after which it is expected to conclusively ascertain the value of its hardening properties through the mass of suspended sludge of fines precipitated upon surface, or fails in the proper preparation of the well before cementing, uses an inadequate pumping or depositing equipment and an insufficient quantity of cement insufficiently slurrified in an excessive volume of water containing detrimental elements, or with an excess volume of water or mud fluid forces the column of cement beyond and above the locality where the cement is required, not only defeats his own purpose but also that which is impartially expected of the cementing material.

Special Attention for Oil Well Cement

Doubtless a number of cement manufacturers have given time and attention to the study of cement requirements for oil field service. How many of these who have in reality effected a contributive improvement in their product, the writer is not prepard to say; a diligent investigation of the brands marketed as Special Oil Well Cements, rather than the branded sack, would disclose its distinguishing features from commercial cements; but it may be conscientiously said of and proven in the instance of the Santa Cruz Portland Cement Company, whose plant is located at Davenport, California, and with whom the writer is identified, that this company has faithfully applied itself to the study of cementing materials for oil well development and has effected considerable improvement of distinct value in their special oil well product against the detrimental influences prevading the scope of application, and through the writer, who is their directing chemist, they have been liberal in communications with many of the principals among the oil field operators in disclosing such findings as might have acceptable values in instances of specific character.

Our principal efforts were applied in combating the detrimental effects of precipitant salts contained in waters used for slurrifying cements and those surrounding the cement at rest; to the attainment of highest degree of specific gravity and density of slurrified mass; in accounting for the quality and quantity of the soft, sludgy, chalky substance of non-hardening value baled from wells; to the consistency of cement slurry most favorable to prompt hardening and permanency; to improvements in the process of mixing minimum percentages of water; to most favorable grinding for mitigating the effects of grading out; to the devising of some form of standardized method which might be better relied upon for testing cement slurries, and to the development of a live prompt-hardening

cement of highest strength in the first 24 hour period of maximum resistance.

All brands of cement whether or not made specifically for oil wells or commercial purposes are tested at their respective factories by methods prescribed as standard by the American Society for Testing Materials; but inasmuch as each brand differs with the particular raw material from which they are manufactured, only those brands, known as the Santa Cruz Special Oil Well Cement and the Santa Cruz Commercial Cement, with which the writer is especially familiar, will be herein referred to for comparison; the figures being accurate within the limits of analytical and physical determinations, viz:

Chemical Analysis

	Santa Cruz Special Oil Well	Santa Cruz Commercial
Oxide of Silica, (SiO_2)..	19.12%	20.46%
Oxide of Iron (Fe_2O_3)...	4.70	7.52
Oxide of Alumina (Al_2O_3)	6.75	7.58
Oxide of Lime (CaO) ..	64.35	64.26
Oxide of Magnesia (MgO)	1.84	1.96
Sulphur Trioxide (SO_3)..	1.52	1.53
Oxide of Potas. (K_2O)...	.48	.37
Oxide of Sodium (Na_2O).	.55	.46
Loss on Ignition (Loss) .	.82	.91

Physical Properties

	Santa Cruz Special Oil Well	Santa Cruz Commercial
Specific Gravity . .	3.170 to 3.19	3.107 to 3.13
Vicat		
Needle Penetration	10 mm.	10 mm.
Finess-Passing		
100 mesh screen....	96 to 97%	95 to 96%
200 mesh screen....	82 to 85%	80 to 81%
Consistency	21% H_2O	22.5 to 23% H_2O
Setting Time:		
Initial	1 Hr 30 M to 2 Hr 0 M	2 Hr 0 M to 2 Hr 30 M
Final	3 Hr 0 M to 4 Hr 0 M	4 Hr 20 M to 5 Hr 0 M
Tensile Strength—	Per sq. in.	Per sq. in.
24 hrs—Neat	450 to 520 lbs	400 to 440 lbs.
7 days—Neat	950 to 1150 lbs	850 to 950 lbs
28 days—Neat	1020 to 1200 lbs.	950 to1000 lbs
7 days (Sand 1/3)	320 to 360 lbs	340 to 370 lbs.
28 days (Sand 1/3)	400 to 450 lbs	420 to 480 lbs.

In the chemical analysis of the special oil well cement may be noted a decrease in the percentage of silica; the difference having been replaced by iron oxide and lime for two reasons; one of which favors an earlier setting time and the other an earlier hardening, neither of which, however, would become possible without the increased burning temperature to which this particular cement has been subjected.

The iron content is substantially increased to meet the requisite burning requirements and for an increased percentage of the compound with lime, which, when in contact with water will afford less lime hydrate for the precipitation of detrimental salts from impure line and well waters, but at the same time give added weight to the substance as to its specific gravity for maximum density and resistance to incoming well waters.

The percentage of alumina is retained in sufficiently high quantities, which, in combination with lime to full and complete saturation for a compound of calcium aluminate, will aid in decreasing the time required for setting and likewise effect increased activity for a prompt and increasing gain in the hardening of the cement during the earlier periods.

The net result of these purposes is definitely confined in the figures for specific gravity, setting time, and tensile strength.

Testing Slurry

Unfortunately the principles governing the determining values of a cement slurry for shutting off water in oil wells have not become standardized, owing to the lack of field facilities, variation in element content in both line and well waters, the several methods and processes for mixing and depositing the slurry and indifferences in cooperation among operators and contractors, so that many ill provised methods have fallen into practice which are arbitrarily difficult to dislodge.

It is not conceived that there should exist sufficient lack of interest on the part of the operator to curb his desire for knowing whether or not his cement is suitable for his well before use. If he submits his cement to some reliable tester who will report his findings in compliance with standard methods, or cause it to become tested in his own laboratories where maintained, he has acquired the knowledge relating to its behavior under normal consistency so far as standard practice discloses; but when desired to know its value and distinguishing characteristics when slurrified with varying volumes of water, the condition in which it is pumped, he has no reliable method. It must be conceded that both quality and volume of mixing water directly influences the cementing properties relied upon to effect a permanent water seal. Obviously some attention given to means for testing slurrified cements and for determining values in parallel with conditions prevailing in the well, if possible would be a step farther in the line of advancement for better assurance.

The prevailing method for testing cement slurries in the oil fields constitutes the use of carelessly cleaned tin cans, etc., as the containing vessels, into which is placed any indefinite quantity of cement, to which is added any indefinite quantity of water, the whole being stirred to almost complete separation of the contained gypsum and the finer particles of cement from the coarse, which slurry is then set aside for a given period regardless of temperature and sometimes even under vibration, when the degree of hardening, at best fallaciously obtained, is ascertained through the sludgy surface fines in separation. The surface material in this procedure is always soft; while that portion underneath the fines is relatively graded out and varying in degrees of hardness to the limit of sample depth. The primary object in grinding cements fine for giving the finer particles the opportunity to prompt hydration is not only thus defeated, but it is practically impossible for the same operator to duplicate his test in unmeasured quantities and obtain parallel results. The question whether or not the cement may be suitable for use is left to the best judgment of the operator, deservedly so, but when the same cement may be similarly tested in a container of greater depth and narrower diameter the surface fines will have missed in greater depth and so obscure the relative hardening properties as to cause sufficient erring in judgment which would declare the cement unfit for use. These uncertainties, with numerous others which might be cited, are the contributing factors which are constantly interfering with every effort for obtaining true and reliable assurance of cement values.

Better Method

A method improving upon the prevailing one for testing cement slurries should be found highly desirable; one requiring but few simple, inexpensive items of equipment which could be readily used with ease by any operator at the well site or warehouse. Once such a method is generally employed a uniform basis is thus established and results will not only be comparable, but they may be discussed with some degree of assurance even though the method may not possess every attribute to perfected standardization; it would, however, establish confidence in testing and convey a measure of safety not satisfactorily obtainable before.

Owing to the variable conditions present in different fields which would directly affect the determining factor in any method aiming toward standardization, it is safe to assume that such a standardized form as would include each varying detail could not be introduced by one stroke with absolute satisfaction, but merely a step in the proper direction. Many years of operation have served to establish divergent convictions, more or less positive, in the minds of individual operators which would not be moved by an ordinary suggestion; so that any suggestion for a more serviceable method will not find general favor promptly but be supported in time.

The writer herewith suggests a simple method believed to possess the factors for overcoming the doubtful conditions in determining the value of cements through the separated surface fines, being more positive in effect, more closely in parallel with the cement as it would rest in the well, simple in manipulation, more assuring to the operator, and requiring less dependence upon the element of judgment.

Testing Equipment

The simple equipment would constitute the following items, viz:

1 two quart glass jar with rubber gasket and screw cap,

Half dozen agate pans, top diameter eight inches, bottom diameter six inches, depth three inches,

One Gilmore needle, weight one pound, point one-twentyfourth inch in diameter, as used in standard practice for determining the final setting time in cement.

One scale, inexpensive, either metric or avoirdupois, capacity, metric not less than 1360 grams, avoirdupois not less than three pounds, graduated in ounces.

One measuring cylinder for water, capacity 500 c.c., graduated to one-half c. c.

When making tests a definite volume of water equal to 544 c.c. (1 lb., 3 oz.) is poured into the glass jar first, to which is added a definite quantity of cement equal to 1360 grams (3 lbs.).

The water content represents 40 per cent of the weight of the cement and

Announcement!

The FORGED Steel SPIRAL STEM

WILL HENCEFORTH BE MANUFACTURED EXCLUSIVELY BY

The Titusville Forge Co.

We are pleased to announce that the SPIRAL STEM for Cable Tool Drilling, and the SPIRAL DRILL COLLAR for Rotary Drilling, invented and patented by Mr. Loran E. Nebergall, and which have scored a sensational success in Oklahoma, Wyoming, California and other drilling territories in the past two years, will henceforth be manufactured exclusively by The Titusville Forge Company.

The Titusville Forge Company is placing special emphasis on the manufacture of high grade Rotary and Cable Tool Drilling equipment. Our line includes complete tools for both methods, and we are particularly glad to announce the addition of the FORGED Steel Spiral Stem.

The SPIRAL STEM and SPIRAL ROTARY DRILL COLLARS have saved many a crooked hole, which otherwise would have been abandoned. It insures keeping a hole straight when drilling in difficult territory.

We Have Eliminated Castings in Our Product

THE TITUSVILLE FORGE COMPANY
Titusville, Penna.

SPIRAL STEM
SPIRAL ROTARY DRILL COLLAR
PATENTED

cement of highest strength in the first 24 hour period of maximum resistance.

All brands of cement whether or not made specifically for oil wells or commercial purposes are tested at their respective factories by methods prescribed as standard by the American Society for Testing Materials; but inasmuch as each brand differs with the particular raw material from which they are manufactured, only those brands, known as the Santa Cruz Special Oil Well Cement and the Santa Cruz Commercial Cement, with which the writer is especially familiar, will be herein referred to for comparison; the figures being accurate within the limits of analytical and physical determinations, viz:

Chemical Analysis

	Santa Cruz Special Oil Well	Santa Cruz Commercial
Oxide of Silica, (SiO_2)..	19.12%	20.46%
Oxide of Iron (Fe_2O_3)...	4.70	7.52
Oxide of Alumina (Al_2O_3)	6.75	7.58
Oxide of Lime (CaO) ..	64.35	64.26
Oxide of Magnesia (MgO)	1.84	1.96
Sulphur Trioxide (SO_3)..	1.52	1.53
Oxide of Potas. (K_2O)...	.48	.37
Oxide of Sodium (Na_2O).	.55	.46
Loss on Ignition (Loss) .	.82	.91

Physical Properties

	Santa Cruz Special Oil Well	Santa Cruz Commercial
Specific Gravity . .	3.170 to 3.19	3.107 to 3.13
Vicat Needle Penetration	10 mm.	10 mm.
Finess-Passing		
100 mesh screen....	96 to 97%	95 to 96%
200 mesh screen....	82 to 85%	80 to 81%
Consistency	21% H_2O	22.5 to 23% H_2O
Setting Time:		
Initial	1 Hr 30 M to 2 Hr 0 M	2 Hr 0 M to 2 Hr 30 M
Final	3 Hr 0 M to 4 Hr 0 M	4 Hr 20 M to 5 Hr 0 M
Tensile Strength—	Per sq. in.	Per sq. in.
24 hrs—Neat	450 to 520 lbs	400 to 440 lbs.
7 days—Neat	950 to 1150 lbs	850 to 950 lbs
28 days—Neat	1020 to 1200 lbs.	950 to1000 lbs
7 days (Sand 1/3)	320 to 360 lbs	340 to 370 lbs.
28 days (Sand 1/3)	400 to 450 lbs	420 to 480 lbs.

In the chemical analysis of the special oil well cement may be noted a decrease in the percentage of silica; the difference having been replaced by iron oxide and lime for two reasons; one of which favors an earlier setting time and the other an earlier hardening, neither of which, however, would become possible without the increased burning temperature to which this particular cement has been subjected.

The iron content is substantially increased to meet the requisite burning requirements and for an increased percentage of the compound with lime, which, when in contact with water will afford less lime hydrate for the precipitation of detrimental salts from impure line and well waters, but at the same time give added weight to the substance as to its specific gravity for maximum density and resistance to incoming well waters.

The percentage of alumina is retained in sufficiently high quantities, which, in combination with lime to full and complete saturation for a compound of calcium aluminate, will aid in decreasing the time required for setting and likewise effect increased activity for a prompt and increasing gain in the hardening of the cement during the earlier periods.

The net result of these purposes is definitely confined in the figures for specific gravity, setting time, and tensile strength.

Testing Slurry

Unfortunately the principles governing the determining values of a cement slurry for shutting off water in oil wells have not become standardized, owing to the lack of field facilities, variation in element content in both line and well waters, the several methods and processes for mixing and depositing the slurry and indifferences in cooperation among operators and contractors, so that many ill provised methods have fallen into practice which are arbitrarily difficult to dislodge.

It is not conceived that there should exist sufficient lack of interest on the part of the operator to curb his desire for knowing whether or not his cement is suitable for his well before use. If he submits his cement to some reliable tester who will report his findings in compliance with standard methods, or cause it to become tested in his own laboratories where maintained, he has acquired the knowledge relating to its behavior under normal consistency so far as standard practice discloses; but when desired to know its value and distinguishing characteristics when slurrified with varying volumes of water, the condition in which it is pumped, he has no reliable method. It must be conceded that both quality and volume of mixing water directly influences the cementing properties relied upon to effect a permanent water seal. Obviously some attention given to means for testing slurrified cements and for determining values in parallel with conditions prevailing in the well, if possible would be a step farther in the line of advancement for better assurance.

The prevailing method for testing cement slurries in the oil fields constitutes the use of carelessly cleaned tin cans, etc., as the containing vessels, into which is placed any indefinite quantity of cement, to which is added any indefinite quantity of water, the whole being stirred to almost complete separation of the contained gypsum and the finer particles of cement from the coarse, which slurry is then set aside for a given period regardless of temperature and sometimes even under vibration, when the degree of hardening, at best fallaciously obtained, is ascertained through the sludgy surface fines in separation. The surface material in this procedure is always soft; while that portion underneath the fines is relatively graded out and varying in degrees of hardness to the limit of sample depth. The primary object in grinding cements fine for giving the finer particles the opportunity to prompt hydration is not only thus defeated, but it is practically impossible for the same operator to duplicate his test in unmeasured quantities and obtain parallel results. The question whether or not the cement may be suitable for use is left to the best judgment of the operator, deservedly so, but when the same cement may be similarly tested in a container of greater depth and narrower diameter the surface fines will have missed in greater depth and so obscure the relative hardening properties as to cause sufficient erring in judgment which would declare the cement unfit for use. These uncertainties, with numerous others which might be cited, are the contributing factors which are constantly interfering with every effort for obtaining true and reliable assurance of cement values.

Better Method

A method improving upon the prevailing one for testing cement slurries should be found highly desirable; one requiring but few simple, inexpensive items of equipment which could be readily used with ease by any operator at the well site or warehouse. Once such a method is generally employed a uniform basis is thus established and results will not only be comparable, but they may be discussed with some degree of assurance even though the method may not possess every attribute to perfected standardization; it would, however, establish confidence in testing and convey a measure of safety not satisfactorily obtainable before.

Owing to the variable conditions present in different fields which would directly affect the determining factor in any method aiming toward standardization, it is safe to assume that such a standardized form as would include each varying detail could not be introduced by one stroke with absolute satisfaction, but merely a step in the proper direction. Many years of operation have served to establish divergent convictions, more or less positive, in the minds of individual operators which would not be moved by an ordinary suggestion; so that any suggestion for a more serviceable method will not find general favor promptly but be supported in time.

The writer herewith suggests a simple method believed to possess the factors for overcoming the doubtful conditions in determining the value of cements through the separated surface fines, being more positive in effect, more closely in parallel with the cement as it would rest in the well, simple in manipulation, more assuring to the operator, and requiring less dependence upon the element of judgment.

Testing Equipment

The simple equipment would constitute the following items, viz:

1 two quart glass jar with rubber gasket and screw cap,

Half dozen agate pans, top diameter eight inches, bottom diameter six inches, depth three inches,

One Gilmore needle, weight one pound, point one-twentyfourth inch in diameter, as used in standard practice for determining the final setting time in cement.

One scale, inexpensive, either metric or avoirdupois, capacity, metric not less than 1360 grams, avoirdupois not less than three pounds, graduated in ounces.

One measuring cylinder for water, capacity 500 c.c., graduated to one-half c. c.

When making tests a definite volume of water equal to 544 c.c. (1 lb., 3 oz.) is poured into the glass jar first, to which is added a definite quantity of cement equal to 1360 grams (3 lbs.).

The water content represents 40 per cent of the weight of the cement and

Announcement!

The FORGED Steel SPIRAL STEM

WILL HENCEFORTH BE MANUFACTURED EXCLUSIVELY BY

The Titusville Forge Co.

We are pleased to announce that the SPIRAL STEM for Cable Tool Drilling, and the SPIRAL DRILL COLLAR for Rotary Drilling, invented and patented by Mr. Loran E. Nebergall, and which have scored a sensational success in Oklahoma, Wyoming, California and other drilling territories in the past two years, will henceforth be manufactured exclusively by The Titusville Forge Company.

The Titusville Forge Company is placing special emphasis on the manufacture of high grade Rotary and Cable Tool Drilling equipment. Our line includes complete tools for both methods, and we are particularly glad to announce the addition of the FORGED Steel Spiral Stem.

The SPIRAL STEM and SPIRAL ROTARY DRILL COLLARS have saved many a crooked hole, which otherwise would have been abandoned. It insures keeping a hole straight when drilling in difficult territory.

We Have Eliminated Castings in Our Product

THE TITUSVILLE FORGE COMPANY
Titusville, Penna.

SPIRAL STEM
SPIRAL ROTARY DRILL COLLAR
PATENTED

the mass of 40 per cent slurry. The jar is then capped and the whole vigorously shaken for 30 seconds, the cap quickly removed and the contents poured into one of the agate pans in which the slurry is allowed to harden. With least agitation of the slurry the cement may then be covered with water to the containing capacity, and set aside in room temperature, preferably at 70 degrees to 72 degrees Fahrenheit, free from vibration. At the end of the first 24 hour and 48 hour period, the Gilmore needle is allowed to bear its own weight upon the surface and notations made of the depth of penetration.

If the needle does not penetrate to a depth to exceed one sixteenth of an inch in the 24 hour period, due allowance being made in each instance for the surface fines, the cement may unquestionably be passed as having the necessary hardening properties. Each test should be made in duplicate; one using the line water intended for use in mixing the cement at the well and another with tap water used for husehold purposes, owing to the effect of the precipitated impurities contained in the mixing water upon the hardening of the cement. Certain elements in water are readily precipitated by the action of lime hydrate formed when cement is slurrified with water. When the specimen containing line water suffers a penetration in excess of that containing the tap water, it is immediately apparent that the cement itself is not the contending factor, but that of a condition imposed upon the cement which must be figured with in the time allowed for the hardening of the cement in the well to the extent of overcoming the retarding influence, or if possible to mix the cement with a better water, the effect of which is evidenced by the tap water specimen.

It is quite apparent that the methods of testing just described offer no pretense in the valuation of a cement other than its hardening properties which alone do not constitute the whole of the contributing factors essential to a permanent cementing job; there are other properties, the identity of which varies in different cements used and inherent in the constitution of the cement itself, as well as influences entirely apart from the scope covered by cement alone.

While thus far only those matters relating to the valuation of a cement with respect to its identity, quality, properties and testing, and influences affecting its manufacture treatment and use have been referred to, some of those phases underlying the failure in shutting off water by the cementing process should receive additional consideration.

Influences Affecting Cementing Jobs

Causes of cementing failures may be traceable directly or indirectly to influences physical, chemical or mechanical, individually or collectively.

Physical Causes

First—Agitation through the column of cement effecting a stage of unrest in the cement before it has become sufficiently hardened.

Once the cement has been gauged with water whether for test in the laboratory, on the deck of the well rig, or deposited in the well, in the presence of any vibration or agitation from mechanism, bubbling of gas, air, oil or water through the mass, all prerequisites to early hardening will be destroyed.

Second—Qualities in the cement which affect density of mass and insufficient resistance.

Those cements having the highest specific gravity will not only find their point of rest more quickly with less separation of fines from the coarse, but will have the greatest density in mass; and when so consituted to develop a strong 24 hour standard tensile strength of not less than 450 pounds per square inch, will similarly offer the greatest resistance against all waters or destructive agents.

Third—Admixture of mud-slurries at or near the point of rest during the cementing process.

Whatever the proportional admixture of clay, shale, silt or sand may be at the point of rest, it will relatively increase the time required for the cement to harden (if the particles of cement have not already become sufficiently coated to render it impossible) and will relatively decrease its essential power for permanent resistance.

To be concluded in next issue

With the

Strength

of Steel

and the

Resiliency

of Wood

Included in Their Structure—

National Turnbuckle Derricks

—are unsurpassed for Rotary or Cable Tool drilling

The Girths are made of 3 inch steel tubing and the Turnbuckle Braces are 1 inch steel rods. Legs are of 8x8 inch Long Leaf Yellow Pine with top legs 12x12 inches.

The steel girths and braces absolutely prevent twisting and the wood legs provide the resiliency that is so necessary in drilling derricks.

National Turnbuckle Derricks can be furnished in any standard height for Rotary, Cable Tools or Pumping. They are guaranteed to do the work at any depth and to salvage 100% if properly cared for.

NATIONAL TURNBUCKLE DERRICK CO.

413 WRIGHT BLDG TULSA, OKLA.

Affiliated Companies:
Osage Rig, Reel and Lumber Assn.
McCarty, Mahan & Besse—Contract Rig Builders

PERSONAL MENTION-MEN YOU KNOW

Frank J. Bates, head of the scouting and leasing department of the Texas Pacific Coal and Oil Company with headquarters at Fort Worth, Texas, is on an extended business trip to Great Falls, Montana.

J. R. McGinley of the Marland Oil Company's Tulsa office, was out of town the first of the week in connection with company business.

I. W. Fuqua is back at his desk at the California Petroleum Corporation in Los Angeles after several weeks spent taking a rest.

Frank T. Pickrell of El Paso, vice president of the Texon Oil and Land Company which brought in the discovery well in Reagan County section of West Texas, was a business visitor in Fort Worth last week.

Cyrus Bell, for many years a production official of the Standard Oil Company of California, has recently resigned his position to enter business for himself at Los Angeles.

Bruce Barkus, for some time field engineer for the California State Mining Bureau, has recently resigned to join the staff of the Pan American Petroleum Company.

H. N. Cole, vice president and general manager of the Pure Oil Company in the Southwest, has returned to his offices in Tulsa after a trip to Kensman Station, Ohio.

W. W. Gregory, who has been in charge of the North Bristow district in Oklahoma for the Transcontinental Oil Company, has resigned.

Ed Keller has returned to Wichita, Kansas, from the California fields, where he has been engaged in development work.

S. R. Naylor, W. H. Forguson and J. M. Hollister have been elected to the board of directors of the Continental Oil Company with headquarters at Denver.

A. C. McLaughlin, vice president and general manager of the Associated and Pacific Oil Company, was re-elected president of the Chamber of Mines and Oil of California at a recent meeting, having already served one term. Other executive officers were also re-elected to serve during 1924. The following were added to the board of directors: E. B. Gilmore, S. A. Guiberson, Jr., W. M. Keck, representing the oil interests, and Edwin Higgins, Elmer E. Paxton and Robert E. Tally, representing the mining end.

H. A. Meyer, assistant to Dana H. Kelsey, vice president and general manager of the Prairie Oil and Gas Company, was away from his office in Independence, Kansas, the first of the week on a business trip to Oklahoma.

John L. Hays has been elected a director of the South Penn Oil Company of Pittsburgh, succeeding E. E. Grocker, who has resigned.

A. B. BROOKS

Member of the board of directors of the Standard Oil Company of California and in direct supervision of the purchasing division

William Cook, who was editor for some time of the California Oil Worker, is now calling Needles, California, home and is editor of a weekly paper at that place.

Samuel W. Coons, president of the Standard Oil Company (Kentucky), has been elected a member of the board of directors of the National Bank of Kentucky of Louisville.

E. E. Simpson, general manager of the Oklahoma Eastern Oil Company, has left Tulsa for a trip to the West Coast.

Isaac F. Marcosson, staff representative of the Saturday Evening Post with headquarters in Philadelphia and New York, is on a tour of the Mid-Continent and Western oil fields gathering material for a series of special articles dealing with petroleum.

S. M. Blevins has resigned his position with the Gilcrease Oil Company of Tulsa to accept the position of secretary of the Wetumka, Oklahoma, Chamber of Commerce.

W. E. Haggard of Winfield, Kansas, formerly in charge of production for the Emerald Oil Company, was in Tulsa recently renewing acquaintances.

Thomas A. O'Donnell, president of the American Petroleum Institute and chairman of the board, California Petroleum Corporation, has returned to his home at Los Angeles after attending and presiding at the annual meeting of the Institute at St. Louis.

Capt. J. F. Lucey, who has always been ready to assist in any movement for the benefit of the public in general, during his recent visit to Los Angeles took a prominent part in a meeting seeking aid for the starving in Germany.

Corlett Resigns to Go Into Business

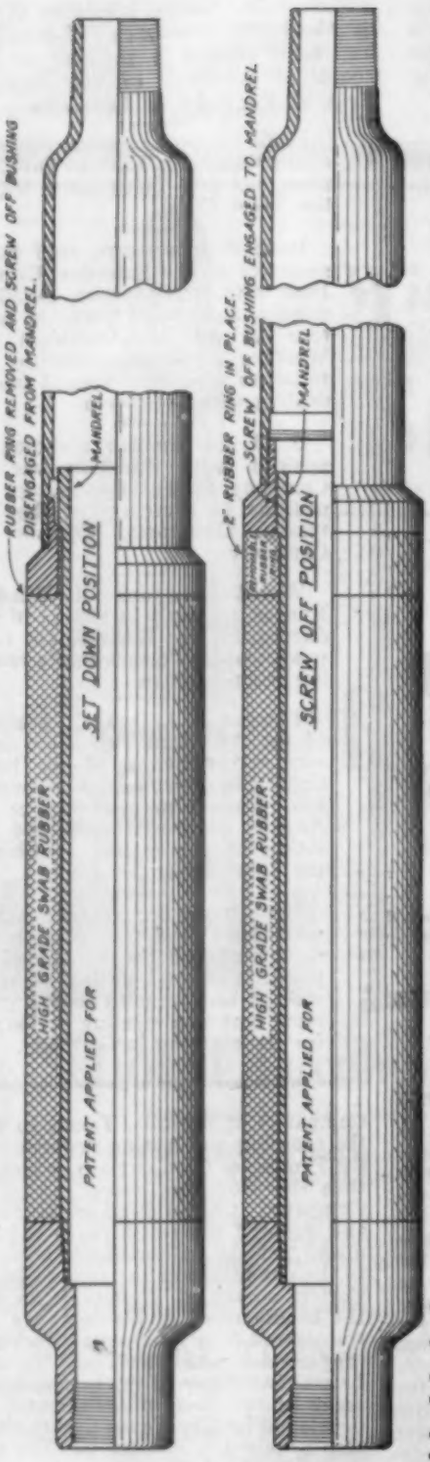
Wichita Falls, Texas, Jan. 21.—W. B. Corlett, a veteran employe of The Texas Company and one of the pioneers in the development of the North Texas oil fields, has resigned from his position as head of the land and lease department of The Texas Company in the North Texas district effective February 1, to enter the oil business for himself. Corlett has held this positon for the past six years, and is considered one of the best posted men on acreage in North Texas and throughout the Panhandle district, having the reputation of knowing nearly every farmer and ranch owner in the territory.

Corlett's connections with The Texas Company dates back to 1908 when he left the service of the Corsicana Oil Company (now Magnolia Petroleum Company) at Petrolia, Texas, to enter the scouting and leasing department of the Producers Oil Company, which was then the producing end of The Texas Company. Corlett lived at Henrietta, and scouted his territory in a horse-drawn vehicle, or horseback, according to the conditions of the roads. In 1910 Corlett moved to Wichita Falls when the headquarters of his company were transferred from Henrietta. During his long service with The Texas Company he was instrumental in the purchase of some of the most prolific leases ever developed by The Texas Company, and also acquired a number of "life time" leases in North Texas.

Corlett plans to take a brief vacation, and will then open offices at 205 Bob Waggoner building in Wichita Falls.

Two Packers in One

W-K-M Combination Screw-off and Set Down Gas Anchor Packer



W-K-M COMBINATION SCREW OFF AND SET DOWN GAS ANCHOR PACKER

PATENT APPLIED FOR

This Packer is always made up by us as a SCREW-OFF Packer.

If you want to use it as a SET-DOWN Packer, all you have to do is to take out the 2″ section of rubber and screw down the set nipple until the threads are free.

This packer is made with the Highest Grade Tough Swab Rubber only as this kind of rubber expands freely to give a perfect seal and contracts easily if you take off the weight of the tubing in case you want to pull the packer.

The W-K-M Combination Screw-Off and Set-Down Gas Anchor Packer is the best packer ever made.

Write for descriptive folder and prices.

W-K-M COMPANY, Inc.

HOUSTON, TEXAS

Manufacturers and Distributors of Oil Field Specialties

DISTRIBUTED THROUGH OIL FIELD SUPPLY HOUSES

FIELD NOTES AND PRODUCTION STATISTICS

California Stocks Drawn Upon in December

Increase in price follows announcement of revised storage figures by American Petroleum Institute

Los Angeles, Calif., Jan. 22.—Announcement by the San Francisco office of the American Petroleum Institute that revised figures show that oil stocks on the Pacific Coast were drawn upon in December, was followed closely by an advance of 25 cents per barrel. The new price was initiated by the Standard Oil Company of California, and brings the top price to $1.01 per barrel. The advance also affected fuel oil 25 cents per barrel, and gasoline tank wagon was advanced two cents per gallon at the same time. The new prices were made effective today.

The American Petroleum Institute states that a recheck of storage conditions during December and early in January showed the necessity of revising figures on crude storage previously announced for the close of November, and after the revision had been made, it was found that slightly more than 155,000 barrels of crude were withdrawn from storage in California during the month of December.

Bomb Shell

The announcement came like a bomb shell. It could hardly be believed at first, since it had been figured that stocks would not be drawn upon before May or June, and not to any considerable extent until July. Any statement that stocks were slightly drawn upon in December would lead one to believe that the withdrawal will be much greater in January. There was but one conclusion to be reached—that crude prices were due for a raise and right away.

According to A. P. I. figures, compiled by the San Francisco office, the crude in storage at the end of last November was 92,081,143 barrels rather than 89,003,345 barrels as has been published. It seems that more than 2,800,000 barrels of crude was found that had not been accounted for heretofore. The revision made no change in the amount of tops on hand, but the total of residuum and crude heavier than 20 gravity was boosted about 2,000,000 barrels. There was an increase of about 800,000 in crudes lighter than 20 gravity, brought about by the recheck.

Drew on Stocks

According to the same authority, at the end of December storage of crude reached a total of 91,925,153 barrels. Tops showed a small increase, as did the lighter oils, but the decline in stocks of residuum and heavy oils brought a total decline of slightly more than 155,000 barrels in stocks. Where the 2,800,000 barrels came from is not explained,

(Continued on page 33)

CALIFORNIA FIELD OPERATIONS

The following table from statistics compiled by State Oil and Gas Supervisor R. D. Bush for California for the past several weeks gives a true insight into field activities:

Month ending—	New wells started	Water shutoff tests	Deepening jobs	No. wells aband.
*June	120	195	59	22
July	94	145	46	23
*August	96	141	41	26
Sept.	122	194	39	36
October	114	131	38	25
November	100	151	48	23
Week ending:				
December 1	18	41	7	9
December 8	15	44	5	10
December 15	26	32	10	5
December 22	23	36	5	1
December 29	23	28	10	7
January 5	34	22	18	3
January 12	24	27	6	10

*Five weeks in month.

Imports of Petroleum at Principal United States Ports

The following figures represent the total imports of crude oil for the month with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	Total at All Ports
January	475,000	745,115	1,636,020	641,006	1,163,120	4,760,155	1,053,000	733,284	1,182,654	40,000	3,011,953	7,772,108
February	421,000	553,510	1,163,971	570,329	1,150,819	3,859,429	1,079,000	951,818	1,019,000	167,000	3,216,818	7,076,247
March	265,000	450,000	2,020,139	848,000	1,406,577	5,045,924	1,857,000	1,611,794	1,453,800	240,000	5,162,794	10,208,718
April	370,000	669,000	1,074,000	625,000	591,000	3,319,000	1,615,000	1,020,000	1,135,000	168,000	4,362,500	7,681,500
May	344,000	515,000	1,026,000	437,000	615,000	2,937,000	1,351,000	910,000	1,184,000	127,000	3,582,000	6,519,000
June	314,000	421,000	1,791,000	755,000	809,000	4,090,000	1,515,000	1,142,000	1,062,000	229,000	3,948,000	8,038,000
July	287,000	465,000	1,806,000	448,000	898,000	3,876,000	1,471,000	1,120,000	833,000	92,000	3,516,000	7,392,000
September	268,000	565,000	1,744,000	660,000	686,000	3,923,000	1,776,000	1,397,000	870,000	224,000	4,277,000	8,202,000
October	365,000	292,000	1,194,000	536,000	816,000	3,203,000	988,000	1,330,000	380,000	50,000	2,248,000	5,951,000
November	223,000	395,000	1,194,000	576,000	757,000	3,145,000	1,478,000	1,000,000	551,000	111,000	3,287,000	5,432,000
December	474,000	574,000	1,243,000	606,000	1,024,000	3,917,000	2,019,000	1,832,000	933,000	259,000	5,043,000	8,960,000
January 5	160,000	214,000	273,000	142,000	183,000	972,000	303,000	437,000	325,000	.....	1,065,000	2,037,000
January 12	75,0000	60,000	243,000	189,000	267,000	834,000	355,000	105,000	132,000	15,000	607,000	1,441,000

NOTE—Figures by American Petroleum Institute.

Receipts of California Oil at Atlantic Coast Ports

The following shows the receipts of California oil at Atlantic Coast ports by months with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	Total at all Ports
March	442,000	184,000	1,355,000	496,000	615,000	2,691,000	.....	.....	.....	.....	.....	2,691,000
April	105,000	256,000	2,456,000	502,000	320,000	3,639,000	.....	478,000	.....	.....	478,000	4,117,000
May	444,000	72,000	1,259,000	764,000	964,000	3,553,000	.....	300,000	53,000	.....	353,000	3,906,000
June	821,000	160,000	3,206,000	826,000	808,000	5,821,000	.....	664,000	.....	.....	664,000	6,485,000
July	443,000	75,000	2,068,000	741,000	699,000	4,080,000	.....	559,000	.....	.....	559,000	4,639,000
August	329,000	229,000	2,956,000	836,000	683,000	5,033,000	.....	970,000	70,000	.....	1,040,000	6,073,000
September	1,028,000	237,000	2,581,000	621,000	443,000	4,910,000	.....	703,000	.....	.....	703,000	5,613,000
October	779,000	224,000	2,503,000	779,000	429,000	4,714,000	.....	746,000	.....	.....	746,000	5,460,000
November	591,000	155,000	2,302,000	584,000	271,000	3,903,000	.....	935,000	.....	.....	935,000	4,838,000
December	456,000	215,000	2,901,000	813,000	753,000	5,136,000	.....	729,000	.....	.....	729,000	5,213,000
January 5	253,000	.....	613,000	150,000	345,000	1,361,000	.....	70,000	.....	.....	70,000	1,431,000
January 12	77,000	.....	1,328,000	94,000	89,000	1,588,000	.....	240,000	.....	.....	240,000	1,828,000

NOTE—Figures by American Petroleum Institute.

Average Daily Production for all U. S. Fields

Kansas

	This Week	Last Week
Eldorado	16,900	16,950
Greenwood	13,450	13,400
Elbing and Peabody	10,200	12,200
Fox-Bush	6,250	6,300
Blankenship	3,520	3,540
Augusta and Douglas	3,450	3,460
Florence and Covert	2,860	2,870
Leon and Weaver	1,290	1,300
Other fields	9,850	9,870
Totals	67,770	67,890

Oklahoma

	This Week	Last Week
Burbank	70,745	66,680
Bristow	50,200	50,200
Cushing	25,600	25,400
Orage (outside Burbank)	24,350	24,050
Okmulgee	22,650	22,550
Hewitt	21,600	20,800
Wewoka	12,395	11,400
Tonkawa	42,400	40,460
Healdton	12,900	12,850
Duncan and Walters	7,000	6,950
Other fields	86,500	84,200
Totals	376,340	365,540

Louisiana

	Last Week	Previous Week
Haynesville	22,110	21,225
Caddo	10,605	10,040
Homer	7,870	8,115
Bellevue	5,560	5,400
Vinton	5,450	5,380
Bull Bayou	5,625	5,600
Elm Grove	1,075	1,010
Evangeline	595	645
Edgerly	385	382
Totals	59,275	57,812

Arkansas

Smackover	91,300	94,440
El Dorado	15,650	15,340
Stephens	3,065	3,015
Irma	1,190	1,040
Totals	111,205	113,835

California

	Last Week	Producing Wells	Prev. Week
Long Beach	232,000	384	232,000
Santa Fe Springs	139,500	295	150,400
Huntington Beach	65,600	251	65,200
Torrance	34,000	113	35,000
Compton	1,300	1	1,300
Others	226,600		220,900
	699,000		704,800

Decline in Shipments of Crude to Atlantic Ports

Los Angeles, Calif., Jan. 19.—For the week ending Friday, a total of 30 tankers moved out of Los Angeles harbor carrying 1,209,351 barrels of crude, 607,998 barrels of fuel oil, 203,600 barrels of gasoline, 6557 barrels of kerosene, 7000 barrels of Diesel engine oil and 890 barrels of distillate.

Only 810,638 barrels of crude went to Atlantic ports, against 1,137,912 barrels the previous week. The distillate went to a Pacific Coast port, while the Diesel engine oil was on a foreign bound vessel.

The week's tabulation follows:

	Last Week	Previous Week
Tankers departed	30	27
Total crude	1,209,351	1,725,219
Total fuel oil	607,998	108,000
Total gasoline	203,600	149,253
Crude to Pacific	398,713	475,307
Fuel to Pacific	129,000	.....
Gasoline to Pacific	67,100	.....
Crude to Atlantic	810,638	1,137,912
Fuel to Atlantic	47,000	.....
Crude to foreign	.....	112,000
Fuel to foreign	431,998	108,000
Kerosene to foreign	2,500	55,233
Gasoline to foreign	136,500	.....

Texas

NORTH CENTRAL

	Last Week	Previous Week
Corsicana-Powell	96,080	91,385
Mexia	34,900	36,390
Burkburnett	21,355	20,660
Stephens County	20,245	20,710
Electra	19,890	18,295
Archer County-Holliday	18,295	18,945
Desdemona - Gorman - Pioneer	7,855	7,805
Ranger - Eastland	7,435	7,375
Young County	4,580	4,620
Currie	3,810	4,000
Moran-Shackelford County	3,585	3,570
K-M-A	1,440	1,330
Strawn-Palo Pinto County	825	1,095
Iowa Park	1,010	915
Mitchell County	850	855
Petrolia-Clay County	365	375
Brown County	350	355
Carson County	235	235
Coleman County	135	140
Reagan County	165	160
Richland	105	115
Thrall-Williamson County	60	55
Jack County	35	30
Totals	243,705	239,060

GULF COAST

Hull	17,550	19,450
West Columbia	14,230	13,775
Goose Creek	13,560	13,372
Orange	12,550	11,872
Humble	5,275	5,275
Sour Lake	4,760	4,800
Damon Mound	1,645	1,642
Saratoga	1,630	1,645
Batson	1,100	1,074
Spindle Top	850	865
Pierce Junction	785	775
Blue Ridge	700	710
Nacogdoches	110	105
Markham	100	100
Dayton	65	65
Stratton Ridge	50	50
High Island	35	35
Big Hill	25	25
Richmond	10	..
Hockley	..	5
Total Gulf Coast	75,030	75,910
Total North Texas	243,705	239,060
Luling (Caldwell County)	5,700	5,700
Mirando	6,000	6,000
Somerset	3,040	3,040
Rockdale-Minerva	475	475
Total for Texas	333,950	330,185

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Oklahoma, Kansas, Texas, Louisiana, Arkansas and Mountain States are compiled by The OIL WEEKLY, while estimates for California and Eastern States are furnished by the American Petroleum Institute.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	†Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyoming-Montana	Calif.	Ark.	U. S. Total
August	726,981	217,208	105,966	323,148	89,998	419,775	97,936	120,750	83,938	375,000	28,834	1,618,765
September	716,107	207,467	107,790	314,932	89,760	418,880	101,857	114,200	80,490	387,000	33,135	1,540,371
October	714,906	200,465	115,130	316,370	90,404	424,037	97,502	116,375	86,412	423,750	34,127	1,489,005
November	711,521	199,223	114,150	388,376	91,098	421,200	93,410	116,375	106,092	450,000	77,225	1,668,776
December	692,702	170,187	111,819	242,010	87,508	435,007	86,513	114,900	108,679	484,000	107,732	1,722,349
January (1923)	708,372	184,885	115,628	304,790	86,720	436,767	81,205	113,500	123,254	517,500	111,920	1,770,645
February	712,007	180,364	96,984	286,493	85,298	446,345	78,068	112,500	110,328	587,500	101, 346	1,805,496
March	720,287	184,582	89,873	283,355	86,012	449,693	75,352	109,900	118,580	653,000	108,630	1,888,522
April	756,381	192,148	92,320	293,780	86,483	478,100	76,854	424,000	127,860	711,250	102,099	1,983,026
May	793,774	203,776	90,905	304,032	85,500	504,498	75,368	109,125	125,680	700,125	109,033	2,010,840
June	824,297	217,162	92,240	320,250	85,255	521,880	72,745	110,300	129,559	773,000	133,592	2,159,818
July	866,665	274,330	91,795	378,335	84,785	508,405	70,085	113,000	137,300	851,000	132,395	2,275,305
August	826,982	278,574	94,398	393,780	82,741	464,416	68,739	112,625	137,909	866,250	123,000	2,251,966
September	830,517	371,730	93,649	443,461	77,078	421 763	68,935	108,400	157,742	851 700	127,955	2,269,176
October	876,059	408,036	84,420	511,483	71,362	371,657	65,305	107,750	139,912	823,125	125,145	2,240,741
November	935,975	479,383	82,747	580,700	69,337	387,253	64,701	108,125	151,225	768,275	124,188	2,253,806
December	729,591	283,130	78,033	378,478	68,444	378,017	61,138	110,300	146,770	723,845	120,049	1,987,041
January 5	678,713	241,342	74,025	330,542	68,050	369,321	59,755	108,000	139,350	700,300	115,380	1,890,698
January 12	672,490	239,060	75,910	330,185	67,890	365,540	57,812	109,000	151,600	704,800	112,795	1,899,622
January 19	687,815	243,705	75,030	333,950	67,770	376,340	59,275	108,000	144,900	699,000	111,205	1,900,440

*Includes North-Central Texas, Kansas, Oklahoma.
†Beginning February, 1923, Somerset, Mirando, Rockdale and Luling production included.
NOTE—Mexia production included in North Central Texas.

(U. S. Completions Begin on Page 41)

California Stocks Drawn Upon in December

(Continued from page 31)

and neither was any reason given for not finding it sooner.

According to annual figures on the fields of California during 1923, the state last year produced more oil than during the two previous years combined. The production last year for the state was 263,728,895 barrels, using statistics compiled by the American Petroleum Institute. The production in 1922 was 139,626,876 barrels, while 1921 production was 114,566,901 barrels.

A total of 1273 wells was completed during the year 1923 in California, 980 of which were producers of oil with a grand total of 1,376,279 barrels initial or flush production. This is an average initial production of 1404 barrels per well, probably the best initial production average ever reported by any state for any year.

Big Initial Production

The startling feature of field statistics is the fact that Huntington Beach, Long Beach, and Santa Fe Springs produced a total of 182,947,278 barrels of the grand total of 263,728,895 barrels in the entire state. This means that three fields very near Los Angeles produced all of the oil in the state during the year except 80,781,617 barrels. These three fields completed 651 producing oil wells with a total initial production of 1,239,032 barrels, or a well average of 1903 barrels, flush. For a year's performance for three fields combined, very likely another record is broken for the United States. Santa Fe Springs led all others with 281 completions making a total initial of 684,741 barrels, or a well average of 2437 barrels. Long Beach was next with 250 completed producers with a total initial of 455,978 barrels, on a well average of 1823 barrels.

During the year 293 dry holes were drilled and abandoned, and of this number 35 were purely wildcat holes. Santa Fe Springs abandoned 49 bad holes, Long Beach reported 72 and Huntington Beach reported but 27 for the year.

During January, 1923, there were 712 drilling wells in the state, while only 590 were drilling at the close of the year. The peak in number of drilling wells was reached in July, when 824 were drilling, and the number dropped below 800 in October with 745. Indication early this year is that in another two months several additional wells will be drilling, especially in the older fields of the state.

Open Old Wells

During January, 1923, there were 9077 producing wells in the state, when the monthly production was only 16,457,445 barrels. In May the producing wells numbered 8847 with the monthly production 21,535,365 barrels for the state. August was the banner production month when a total of 26,440,005 barrels was produced in the state. In September production for the state showed its first decline with Santa Fe Springs and Huntington Beach being the cause, and the decline has been steady since that time. In December, there were 9396 producing wells in the state, showing that a number of the shut in producers had been opened.

Big Demand

There is plenty of empty storage, both steel and reservoir, available at this time and there is the keenest of competition for the crude from new wells. As high as 25 cents premium has been offered for one or two tanker cargoes with no takers. A producer at this time will have no trouble in selling his production to an independent for a premium of five to 15 cents.

$1,600,000 Involved in Corsicana-Powell Deal

Corsicana, Texas, Jan. 21.—An undivided half interest held by Frank Buttram, a geologist of Oklahoma City, in the producing properties developed in the Corsicana-Powell field by the Tidal-Buttram interests has been purchased by the Tidal Oil Company for a consideration reported at $1,600,000. These properties were originally owned by Buttram, who sold a half interest to Tidal Oil Company after the field broke into prominence, for a cash consideration, and the expense of drilling and operating was shared jointly. Although all details involved in the transfer of the full interest to the Tidal Oil Company have not been completed, the sale date is placed at January 1, 1924.

The producing properties involved in the deal have proven to be among the most prolific in the Corsicana-Powell field, as the first well was not completed until August 16, 1923, and by the first of January a total of 3,400,000 barrels of oil had been produced by 37 wells, or an average of about 91,892 barrels of oil per well within four and one-half months. The peak in daily production from these properties was reached on October 21 with a total of 79,550 barrels, while on January 1 the daily production was placed at 5500 barrels, and has since increased to about 6200 barrels daily. The leases are: S. D. Ramsey "A" 29 acres and eight wells and one shallow producer; S. D. Ramsey "B" 21 acres and seven wells; W. L. Phillips 55 acres and 11 wells; Lovett-Crews 25 acres and seven wells; R. S. Thompson 20 acres and three wells, and John Bressie tank farm site owned in fee with one well in corner of 87 acres. The high record of production made in such a brief period was obtained almost entirely from 150 acres in leases, as the tank farm well was the last completion made by the Tidal-Buttram interests.

Tank farms, including about 1,500,000 barrels of steel storage facilities and close to 800,000 barrels of crude stocks, were included in the transaction.

New Stephens County Well Makes Good Flow

Fort Worth, Texas, Jan. 22.—The first new production of any importance registered in the Stephens County section of the Central West Texas district since the first of the year was added last week when the Texas Pacific Coal and Oil Company's T. L. Rogers 1 began flowing natural at the rate of 30 barrels per hour from gray lime pay at 3215 to 3245 feet. A gauge taken of the flow of oil for the second 24 hour period after completion showed a production of 510 barrels. This well is located in the center of the northwest quarter of section 17, block 5, and about three miles north of Caddo.

An outside location on the southeast edge of the Curry pool in Stephens County was proven for production late last week when the Humble Oil and Refining Company's A. J. Jones 6 flowed 370 barrels daily after drilling lime pay from 3162 to 3205 feet. This well is located along the west line of the northwest quarter of section 26, Lunatic Asylum Lands. In the south half of Stephens County, the Texas Fidelity Oil Corporation's J. W. Parks 4 is reported good for 4,000,000 cubic feet of gas from broken pay at 1990 to 2105 feet. Outside of a 150 barrel producer completed on the Henderson tract by the Sinclair Oil and Gas Company, the above three wells are the only producers completed in Stephens County this month.

WHEN MINUTES COUNT

Command Us—Day or Night

Suppose you have sudden need for a set of drill pipe slips

Wire us for H & W Slips. They have Removable Hard Steel Liners. You merely turn two screws to drop out the old slip liner and install a new one. They are always ready for shipment.

H & W Slips are supplied with long handles which turn down out of the way.

Sizes 2½", 6" d. p. and 8½" Casing

We make more than a score of special tools. We respond at all hours to calls for cutting drill pipe or perforating casings.

Baash-Ross Tool Company

5512 Boyle Ave. Los Angeles, Calif.
P. O. Box 1110 Arcade Sta. Phone Hum. 3933

Opening of Burbank Wells Has Little Effect

Price advance coming at same time indicates that operators knew what they were doing

Tulsa, Okla., Jan. 23.—It is obvious that the partial abrogation of the Burbank shut down plan has had little effect on the crude oil market of Oklahoma. Scarcely had one-half of the large number of wells on the sand been drilled to completion until the Prairie Oil and Gas Company posted an advance in crude prices. With the exception of one major company operating in the Mid-Continent area, all purchasers have met the Prairie price.

This advance came as the climax to the different opinions which have been expressed since January 10, the date on which the operators of the Burbank pool partially lifted the shut down at Burbank. It is now evident that the operators who voted for the abrogation knew just about what they were doing. It now seems that the shut down plan will be past history after the next meeting of the Burbank operators on February 8.

The last week in Oklahoma has been a phenomenal one as far as new completions are concerned. A 6500 barrel well for the Tidal-Osage Oil Company is one of the largest wells completed in the state for some time. On Saturday morning, coming almost simultaneously with the advance in crude prices, the Tidal-Osage company's No. 31 came in flowing from 250 to 350 barrels of oil per hour. The well is 2298 feet deep. It is located in the northwest corner of section 34-22-10, not far from the big Gypsy well completed in the Burbank pool during the latter part of 1922.

In the Stroud district, a direct offset to the north of the J. A. Hull well which made 1600 barrels of oil when brought in on Christmas morning, the Roxana Petroleum's No. 1 Zollers, is making 75 barrels of oil per hour. This is the third well for this district, the discovery well being the Union Petroleum and Supply well, an east offset to the Roxana well and the Hull well to the north. The sand was topped at 4093 feet and the hole immediately filled with oil. After drilling to 4107 feet, the present production came in. The location of the well is in the southwest corner of section 1-14-6, Stroud field of Lincoln County. The Hull well continues to make about 1600 barrels of oil per day.

In Lincoln County, near Chandler, Tom McMann has topped a sand at 3310 feet that is apparently good for 5,000,000 feet of gas. Water from behind the casing is breaking into the well and the process of underreaming will be started immediately in order to stop the flow of water. The well is located in the southwest corner of the northeast of section 7-14-4, and is known as the Norton No. 1.

The Carter Oil Company has added another good well to the Hewitt pool by successfully completing their Ward 20 in the center of the northeast of the northwest of the northeast of section 21-4s-2w. The well topped the sand at 3106 feet and is making about 40 barrels of oil per hour. The well has been shut in on account of an agreement with other operators drilling offsets. The Carter Oil Company is now preparing to drill three new tests in the Hewitt pool in an effort to locate the structural position of the deep sand in the field.

The H. F. Wilcox Oil and Gas Company has completed a well near Bristow which is reported to be making around 40 barrels of oil per hour. The well is known as the Harjo No. 6, and is located in the northwest of the southeast of the southwest of section 35-16-8, and the sand was encountered at 3070 feet. The total depth of the well is shown at 3094 feet, or 24 feet in the Dutcher sand.

The Tidal-Osage Oil Company's well in the Hominy district which came in last week, has been deepened six feet and is now making upward of 5000 barrels per day. The well is known as their No. 131 and is located in the northwest of section 34-22-10, Osage County.

In the Lyons-Quinn pool in Okfuskee County which was opened up recently by the Atlantic Oil Producing Company, the Sinclair Oil and Gas Company is reporting about 800 feet of oil in their well in the northeast of the southeast of section 34-11-11. The sand was topped at 2505 feet. The Oklana Oil Company and King Brothers are drilling tests not far from the Sinclair well.

A show of oil is being reported in the McGinnis and Ward No. 1 well in Alfalfa County. The well is a wildcat located in the center of the northeast of the southwest of the southeast of section 21-27-10 west, southeast of Cherokee. A broken lime formation was encountered at 1385 feet with a slight show of water. The well is now shut down to repair the boilers.

The Dixie Oil Company has added two good wells to the Wewoka pool in Seminole County. Their Charles Foster No. 1 in the southwest of the southwest of section 28-8-8 is making 450 barrels of oil per day from 3143 feet and their Isaac Walker in the southeast of the northeast of the northwest of section 32-8-8 is making about 35 barrels from 3142 feet. Another well for the Dixie Oil Company at Wewoka is the John Long No. 4, in the northeast of section 32-8-8, which is reported to be making 80 barrels of oil per day from a sand at 3142 feet.

The Independent Oil Company will deepen their wildcat well in section 15-9-8 in Seminole County. The present depth of the well is 3573 feet. Wewoka shows an increase of 989 barrels of oil per day on the daily production tables. This is the first time the Wewoka pool has shown an increase in some time.

The Magnolia Petroleum Company has completed their pipe line from the North Duncan to the Cement field, which will be quite an incentive for increased activity as the producers have been forced to pay a freight charge of 55 cents per barrel from the Cement field.

Although the Tonkawa field lost a little over 2000 barrels of oil last week, a gain of 1932 barrels is reported for this week. It has been predicted that the production of the field will fall to around 30,000 barrels before March 1, but with the increase reported this week, it is not likely that the pool will decrease as rapidly as has been predicted.

Kansas Oil Fields Have Very Quiet Week; Prepare for Much Activity in All Sections

Wichita, Kans., Jan. 23.—Kansas has had a very quiet week compared with weeks of the past three months, but with this, it is not an indication that the state is not entering into its greatest year.

Wildcat and proven area wells are drilling on and with the advance of Mid-Continent crude, a new incentive for drilling activity has been posted. Preparations for many new tests are being made in almost every section of the state and it is expected that new fields will be opened up during the present year.

The Wilson & Martin well on the Eastman farm, which came in at Christmas time and opened up a new producing area, has been deepened and is now making about 12 barrels of good oil per hour. The operators of this well were desirous of drilling several feet deeper, but after making only six inches of additional hole, the gas pressure of 7,000,000 feet was so terrific that the drillers were forced to stop. The well is located in the southwest corner of section 5-31-6, in Cowley County, and production is coming from a depth of 2850 feet. The Wilson & Martin interests are hopeful of drilling the well deeper later on but at present they must be satisfied with the present production of the well.

In Montgomery County, the Red Bank Oil Company has evidently brought in a new producer. Their No. 1 Taliaferro in the southwest corner of the northwest of the northwest of section 17-35-17, near Coffeeville, is reported to be making about 200 barrels of oil from a sand at 1210 feet. The sand was topped at 1204 feet.

The new Bratton well of Rogers and associates in Greenwood County, which was successfully completed during the holiday season is now making about 650 barrels of oil per day. The well is located in the southwest corner of the northwest of the northeast of section 14-24-9, and being offset by two wells drilling for the same interests. In the Agard pool a total of 18 rigs is now running.

Two More Pumpers for Reagan County Pool

Possibilities of high gravity field are further increased by two new completions

By H. H. King

Fort Worth, Tex., Jan. 22.—Chances for a high gravity oil field being developed near the wildcat oil producer in Reagan County section of West Texas were materially increased during the past week when the first two tests to reach the producing horizon since the discovery well blew in last May found the pay about normal and showed for producers. These two tests and the discovery well are owned by the Big Lake Oil Company, and are located on University of Texas land in section 2, block 2. Although the two wells drilled into the pay during the past week are credited with having made several heads of oil up into the derrick, no accurate estimates are available on their production, but both will be placed on the pump shortly for a test, with possibilities of one being carried deeper.

Considerable gas is reported coming from the University 2, which is located 800 feet due west of the discovery well, after the top of the pay was reached at 3032½ feet. A sandy lime pay was drilled to 3027 feet, and the hole began filling at the rate of about 200 feet per hour. It is reported that this test may be drilled a trifle deeper as it is logging the formation higher than the other test, which is known as University 3, and located 800 feet to the north and about 1200 feet northwest of the discovery well.

University 3 reached the top of the gray sandy lime pay at 3030 feet on Thursday evening, and filled about 400 feet with oil after standing idle for several hours. The hole was then drilled six feet deeper but the oil production did not show any great increase, with only a small amount of gas. Several trips made with the bailer to the bottom of the hole revealed a quantity of water accompanying the oil. The fluid level in this well continued to rise until sufficient pressure accumulated for a head. The drilling crew is still working on the test and plans are to plug back above the water level.

The performance of the two tests drilled in during the past week bears out the earlier predictions made by officials of the Big Lake Company that the discovery well was located to the west edge of the producing structure, which is supposed to run in a northeast to southwest direction. The four additional tests being started in Reagan County by the Big Lake Oil Company are located along this trend and further east on the structure than the discovery well.

Discovery Well

The discovery of oil in Reagan County is due entirely to the wildcatting efforts of the Texon Oil and Land Company, which secured permits to explore for oil on 64 sections of University of Texas land in a solid block in the lower part of the county. The location for the first test was made in section 2, block 2, and in the west center of the 64 square miles of protection acreage held by the company.

Carl G. Cromwell, a veteran cable tool driller, spudded in the test in June, 1922, and prepared for a long stay on the West Texas plains by erecting comfortable quarters near the drilling well for his wife and child. Month after month elapsed with no encouragement for production being offered by the numerous changes in formations containing lime, shale, slate, sand, red mud, salt, coal, red beds, etc., and the year 1922 passed with about 2600 feet of hole made by Cromwell and his short crew.

The first casing to go in this hole was a string of 15½ inch set at 512 feet, and 12½ inch casing followed at 935 feet after drilling 189 feet of red mud and shale and 38 feet of red beds. A string of 10 inch casing was landed at 1803 feet after the bit pounded its way through 533 feet of salt beds followed by 270 feet of red beds and shale. Fourteen feet of white water sand made it necessary to lower eight and a quarter inch casing to 2440 feet, but this string of casing was later underreamed and lowered on three different occasions, finally landing at 2733 feet. At 2810 feet salt rock was encountered for a thickness of 125 feet, and this was followed at 2935 feet by 105 feet of Bastard lime. The bottom of this lime was logged at 3040 feet, and then four feet of sand was drilled before gas began showing from top of gas sand at 3044 feet. The log of the well lists nine feet of sand showing gas to 3053 feet, where oil appeared for the first time in the hole. According to the original log made by Cromwell, only two feet of this oil pay was drilled, and further operations ceased at 3055 feet (wire line measurements used for the entire log). Some salt water was in the hole when the two feet of oil pay was drilled, as the string of eight and one-quarter inch casing was leaking about four bailers every 24 hours.

LEVI SMITH

Of Pittsburgh, president of the Big Lake Oil Company, has personally supervised the completion of his company's two nearby offsets to the Reagan County discovery well

No Time for Breakfast

This oil and gas producing horizon was drilled with an eight inch hole, and occurred on Saturday afternoon, May 26, 1923. At three o'clock on the same afternoon Carl Cromwell instructed his crew to pull the fire from the boiler and take a rest until Monday morning, while in the meantime Cromwell departed for the nearest telegraph station, which was at Big Lake, to notify officials of the Texon Oil and Land Company of the showing made by the well. No work was done around the well by Cromwell or members of his crew over Sunday, and Monday morning about six o'clock, May 28, the well was seen to make a head of oil up through the derrick by Cromwell and his wife while eating breakfast. Whether Cromwell finished his breakfast that morning has not been determined, as the well made two additional flows on that day, and two flows on May 29. On the following day and each day thereafter the well made a flow over the derrick, with each flow increasing in capacity, although the well had 322 feet of open eight inch hole.

The production of the well sprayed over the surrounding dry and semi-desert country until June 17, when it was connected by two temporary two inch flow lines to a battery of five 500 barrel tanks. During the following three days the well averaged better than 60 barrels of oil daily, and flowed and acted up every few minutes, with gas materially increasing when a string of six and five-eighths inch casing was started in the hole to shut off the water coming from behind the eight and a quarter inch casing. The small string of pipe was set on June 24 and a four inch line connected to the tanks. The well swabbed 123 barrels in eight hours on June 25, and several days later the packer used with the six and five-eighths inch casing was found to be leaking about one barrel of salt water every 24 hours. The swab was lost in the hole on June 28, but the well flowed about 77 barrels in the tanks on this day, and also flowed oil in the cellar by coming up between the six and five-eighths and eight and a quarter inch casings. Early in July about 100 pounds of wheat was worked in between the two strings of casing, but the wheat was blown out the next day and the oil continued to flow up between the two strings. More wheat was worked in, but would not stick. The first gauge taken on the tanks showed 1,356.13 barrels of oil net on the eighth of July, and at the end of July crude stocks in the tank had increased to 3103 barrels.

The lost swab in the well was recovered July 11, and on the following

day the well was credited with having flowed 91.94 barrels of oil in the tanks. Swabbing was resumed July 13, and on the following day the well swabbed 155.79 barrels with one tower on duty. During the first week in August the well swabbed from 113 to 166 barrels daily, and on August 12 was connected up to the pump and placed in operation, making 66.4 barrels on this date, and 210 barrels on the following day. Boiler trouble owing to bad water occurred frequently, and necessitated numerous shut downs, but the well made 4067 barrels in the month of August, and 3046 barrels during the first 21 days in September, or a grand total of 10,216.9 barrels of oil up to this latter date. The well averaged 145 barrels daily on the pump during the first three weeks in September, despite the frequent shut downs with boiler trouble.

An 800 foot offset to the west of this discovery well was started by the Texon Oil and Land Company late in July, and a third test located 800 feet north of No. 2 was spudded early in September. These two drilling tests were well underway when the Benedum-Trees interests of Pittsburgh, Pennsylvania, began negotiating for a purchase of a part of the holdings of the Texon Company and the discovery well. An option was taken by the Benedum-Trees interests on sections 1, 2, 3, 10, 11, 12, 13 and 14 block 2; sections 26, 27, 28, 34, 35 and 36, block 1; and sections 24 and 25, block 9, including the discovery well and the two drilling tests. The Big Lake Oil Company was organized with a capitalization of $4,000,000 to take over these 16 sections, and the Texon company received $1,000,000 of this stock, besides being reimbursed for all indebtedness incurred in obtaining the acreage and operation of the leases. Completion of the two drilling tests and four additional ones free of charge was also part of the consideration paid to the Texon company, thereby curing the permits or leases held by the Texon company on the 64 sections of University land. The Big Lake Oil Company officially took over the above mentioned 16 sections on November 15.

The Texon Oil and Land Company has offices at El Paso, Texas, and New York City, and is capitalized at $2,000,000, with virtually all stock outstanding. The officers are: Haymen Krupp, president; Frank T. Pickrell, first vice president and general manager; John M. Wyatt, second vice president; Elias G. Krupp, secretary; all of El Paso, Texas. This company is the first to ever drill for oil in Reagan County, and has retained all of its 64 square miles of protection acreage surrounding the discovery well, except the 16 sections assigned to the Big Lake Oil Company. According to Frank T. Pickrell, vice president of the Texon company, development of the company's remaining 48 sections will not be started until the wells to be drilled by the Big Lake Oil Company are completed, but it is planned to sell off some of this vast amount of acreage when the present permits from the University of Texas are cured by the drilling now under way or contracted for.

General Price Advance In South Texas Fields

San Antonio, Texas, Jan. 21.—The week closed in South Texas fields with a general advance of 25 cents in crude. The Somerset pool (light crude) was advanced on gravity basis taking the Mid-Continent rate as a basis. Luling crude was posted January 19 at 75 cents by the Magnolia Petroleum Company, chief buyer in the pool. Mirando crude was posted at 65 cents by the Taxpata Pipeline Company earlier in the week. Saturday the Magnolia advanced it 10 cents more, making Mirando crude 75 cents with a ready market, a price that is profitable to producers and created general rejoicing in Webb and Zapata Counties.

The result of these advances undoubtedly will be revival of drilling campaigns in all pools but owing to weather conditions the output cannot be greatly increased for at least another six weeks except that some wells not producing may be opened to capacity instead of being pinched in.

Reagan County Log

The log of the Texon Oil & Land Company's discovery well on University land in Reagan County, Texas, is shown below, with a depth of 3055 feet, but steel line measurements taken after the well was completed registered a total depth of 3026 feet:

—Depth—	Formation
1— 10	Cellar
10— 15	Gravel
15— 35	Lime
35— 80	Sand lime
80— 110	Slate
110— 145	Sand
145— 180	Shale
180— 195	Sandy lime
195— 205	Gray lime
205— 300	Sand
300— 315	Slate
315— 335	Red shale
335— 345	Yellow sand
345— 370	White sand
370— 500	Red shale
500— 515	Red sand, 15½-in set at 512 feet.
515— 530	White sand
530— 540	Red shale
540— 555	Sand
555— 610	Red shale
610— 665	Sand lime
665— 703	Red mud
703— 706	Sandy lime
706— 895	Red mud and shale
895— 933	Redbeds
933— 945	Sand lime 12½-in casing set at 935 feet
945— 952	Sandy
952—1137	Red mud
1137—1670	Salt beds
1670—1940	Red beds and shale 10-in casing set at 1803 feet
1940—1965	Gray lime
1965—1990	Blue shale
1990—2033	Lime
2033—2041	Gray lime
2041—2085	Blue shale
2085—2110	Rock salt
2110—2169	Gray lime
2169—2195	Blue shale
2195—2225	Hard gray lime
2225—2235	Rock salt
2235—2255	Blue shale
2255—2290	Rock salt
2290—2325	Gray lime
2325—2407	Gray sandy lime
2407—2426	White sand
2426—2440	White water sand 8¼-in casing set at 2440 feet
2440—2459	Red beds
2459—2464	Coal
2464—2466	Red beds
2466—2518	Hard gray lime
2518—2523	Red mud
2523—2540	Water sand
2540—2570	read mud
2570—2602	blue slate
2602—2651	Blue sandy lime
2651—2679	Gray lime
2679—2728	Red water sand
2728—2756	Red shale, 8¼-in casing underreamed to 2733 feet
2756—2810	Hard gray lime
2810—2935	Salt rock
2935—3040	Bastard lime
3040—3044	Sand
3044—3053	Gas sand
3053—3055	Oil sand

Crude Oil Emulsions Successfully Treated

by the

Electrical Dehydration Process

Analysis, Tests, and Estimates Furnished

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

308 UNION OIL BLDG.
LOS ANGELES, CALIFORNIA

See Inside Back Cover this Week's Oil Weekly

We carry in our Houston warehouse a large and complete stock of Harrisburg seamless forged products, line, casing and drill-pipe couplings and bull plugs; also largest stock of boiler tubes, seamless, lapweld, and charcoal iron, in the Southwest. Also complete stock in Tulsa.

For prompt delivery to any point in Texas, Oklahoma, Louisiana and Mexico, address

Harrisburg Pipe & Pipe Bending Company of Texas

Houston, Texas. Telephone Preston 5540—P. O. Box 42

Colorado Well Completed as Oil Producer

Transcontinental-Texas well in Moffit County makes 44 barrels per hour on nine hour test

Denver, Colo., Jan. 22.—The Texas Company subsidiary in Colorado, known as the Texas Production Company, and the Transcontinental Oil Company have successfully completed a well in Moffit County. The well is reported by the owners to have made an average of 44 barrels per hour during the nine hour test yesterday. It is now shut down and communication has been cut off on account of a terrific snow storm and 26 below zero weather.

The well is situated on the Hamilton Dome in the above named county, and is about 13 miles from the town of Craig. Oil in the well was encountered in August, 1923, but it was impossible to complete it on account of water. Not being discouraged by the presence of water in the well, the companies interested drilled deeper after casing off the flow and now the well is a producer. Opening up a well defined structure in the mountains of Moffat County, it is the first well for the Hamilton dome situated in the south central part of township 5 north, range 91 west. The center of the dome is almost at the southeast corner of section 33-5-91, and the new well is shown as being on the peak of the dome.

The Texas Company is drilling a block of 10,000 acres for a half interest in the Transcontinental holdings.

The November 10 issue of The OIL WEEKLY carried a story on this well and a discussion on the geology of the Hamilton dome. Predictions that oil would be found in the Dakota sand at around 4000 feet in this article seem to be a reality at the present time.

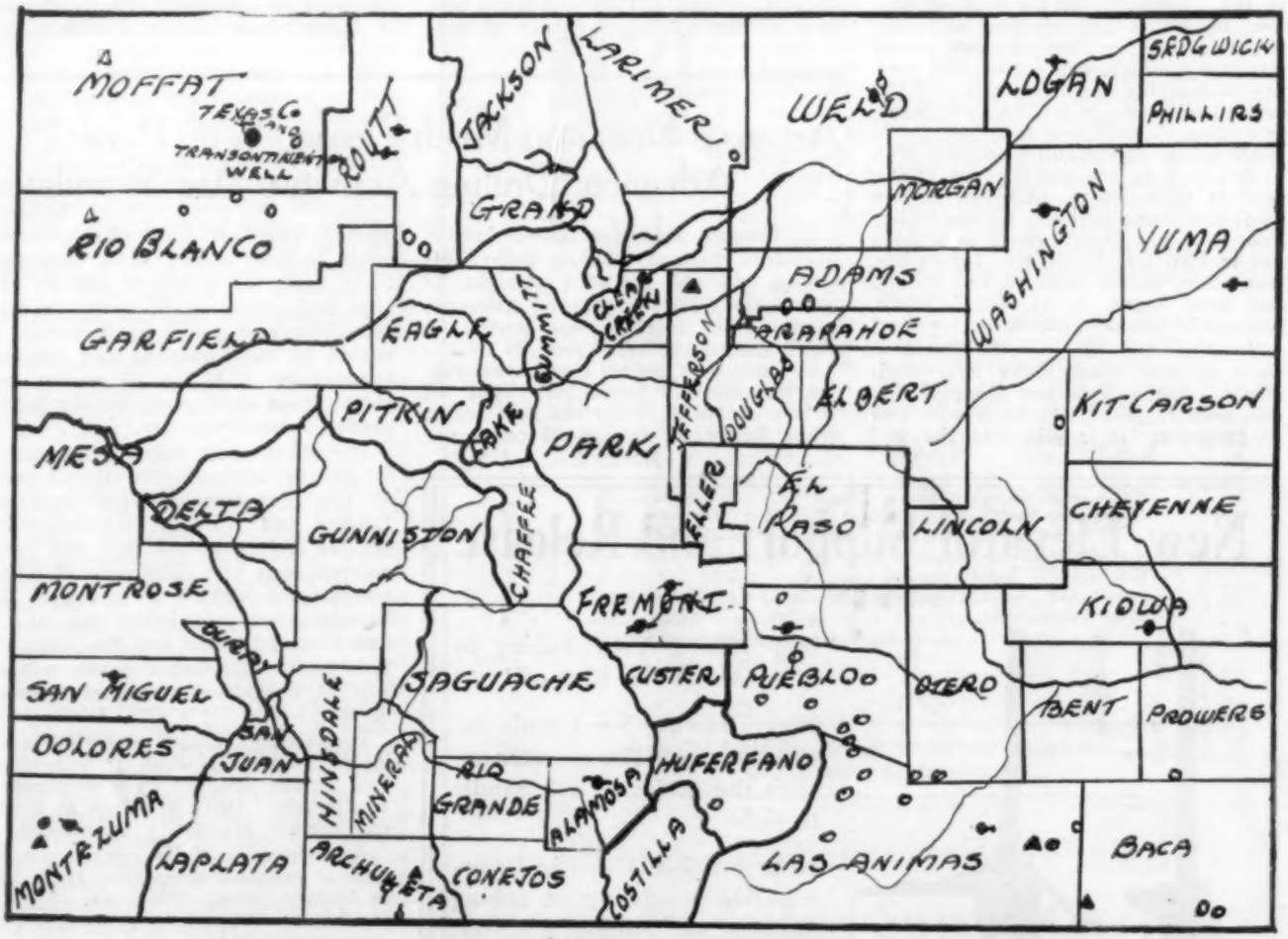
It cannot be stated at present the exact production of the well but there seems to be no doubt as to it being a commercial producer.

The new field will mean increased activity for Colorado and it is more than likely that the Seeping Spring Gulch dome, five miles southwest of the Hamilton dome will see a period of intense prospecting and testing. Although the Transcontinental interests own 10,000 acres of the Hamilton dome it is more than likely it was said, that a good part of this acreage will be sold to other drilling companies. In this event the northwest of Moffat County will at last come into its own as an oil producing county, and the predictions of J. D. Sears of the Department of the Interior, who made an interesting survey of the Hamilton dome in the summers of 1921 and 1922, will become realities.

Union Well Log

The following will show the log of

(Continued on page 40)



MAP OF COLORADO BY COUNTIES SHOWING APPROXIMATE LOCATION OF TEXAS AND TRANSCONTINENTAL WELL IN MOFFAT COUNTY

LEGEND:
ANTECLINE CLOSED
OIL SEEPS
BITUMEN
DRILL HOLES
OIL WELLS
ANTECLINE - NO DETAILS

Standard Will Test Shallow Sand at Homer; Favorable Reports from Prospective Fields

Shreveport, La., Jan. 21.—Favorable reports were received from both Cotton Valley and Oakland last week. From the former comes news to the effect that the Louisiana Oil Refining Corporation's Merritt well has made over 200 barrels of oil in a single 24 hour period, and from the latter comes a report listing several new locations, the drilling of which doubtless will assure a thorough testing of the structure.

The Louisiana company is continuing the test of its Merritt well, probably in an attempt to determine how best to separate the gas from the oil. Two 500 barrel steel tanks are full of pipe line oil, and the well is now producing into a 2500 barrel earthen pit. The Triangle Drilling Company is moving in a rig for the purpose of offsetting this well on the east. The Cotton Valley syndicate has built a derrick for its No. 2 Hodges, in the southeast corner of the northeast quarter of section 15-21-10, a direct western offset to the Fortuna's Merritt well in section 14, which also showed oil. The Triangle Drilling Company has tested its casing, which was set at 2393 feet, but is delaying the completion of the test to be made in its No. A-1 Hope, in section 13-21-10, less than half a mile southeast of the Webb discovery well. O'Brien et al are nearing the casing seat in their No. 1 Dales in section 26-21-9, midway between Cotton Valley and Homer. The Fortuna is drilling below 1000 feet in its No. 1 Stratton, located in section 31-22-10, and drilling has been begun in its No. 1 Pruitt, located in section 17-21-9.

At Oakland, Palmer & Davidson have erected steel tanks near their Frost-Johnson well, but pumping has not been resumed, due to repairs now in progress. It is said that the well will be cleaned out with cable tools before its operation is resumed. They are drilling at 2490 feet in their Green test, in section 19-23-1 east. Noe et al are setting six inch casing at 2070 feet in their No. 1 Gulley, located in section 36-21-1 east, which will doubtless be the next test to be made in this territory. The Roxana Petroleum Corporation is drilling at 945 feet in its No. 1 Smith, in section 30-22-2 west. The Neddo Petroleum Investment Corporation is drilling below 1200 feet in its No. 1 Smith in section 2-23-3 west. The Ohio Oil Company is drilling at 1260 feet in its No. 1 on the Dubach Lumber Company's land in section 15-20-1 west.

The following new locations have been reported from this district:

Gulf Refining Company's Green 1, 200 feet south and 1075 feet west of the northeast corner of section 19-23-1 east; rigging up.

Gulf Refining Company's Security Trust Company 1, 1520 feet north and west of the southeast corner of section 23-23-1 west; moving in drilling rig.

Allen et al's Nale 1, 660 feet east and 150 feet south of the northwest corner of the southwest of the southwest of section 19-23-1 east; location.

Berry & Roberts' Smith 1, 200 feet north and east of the southwest corner of the southeast of the southeast of section 16-22-1 east; location.

Ohio Oil Company's Adkins 1, 330 feet north and east of the southwest corner of section 30-23-1 east; location.

Tarver et al's Rhodes 1, 200 feet south and east of the northwest corner of the northwest of the southeast of section 30-21-1 west; moving in rig.

A very interesting test is to be made soon by the Standard Oil Company of Louisiana in its No. 25 Shaw, in section 30-21-7 of the Homer field, in Claiborne Parish. This is a shallow well, recently begun, in which casing is to be set at around 600 feet in an attempt to test a sand logged at around 700 feet in other nearby wells drilled during the great Homer boom. This shallow sand is said to have yielded excellent showings of oil in several wells scattered throughout the Homer field, but it was passed up in the rush for gushers in about the same manner as was the chalk rock horizon now productive at Pine Island, Caddo Parish.

Arkansas Operators Much Pleased With Price Advance; Drilling Activities Are Stimulated

El Dorado, Ark., Jan. 21.—Arkansas operators were all smiling today, following the posting of a straight 15 cent raise on all grades of Arkansas crudes. The increase was posted by the Standard and met promptly by the Louisiana, Gulf, Atlantic and other major purchasers. Smackover light oil is now worth $1.15 for the best grade, while heavy oil brings 80 cents per barrel. The best grade of El Dorado crude is now worth $1.50, and East Field crude is being bought by the Gulf and others at 80 cents per barrel. The new prices at Stephens, as posted by the Louisiana and Atlantic, range from $1.20 for 28 gravity and above down to 80 cents for the lowest grades, below 23 gravity.

The effect of the rising crude market is already noticeable in the increase of new locations reported from the Louann and Norphlet districts. Increased activity by the Gulf and Texas companies is particularly noted. New completions making as much as 200 barrels per day or better can still be had around Louann and Norphlet, and it is likely that better prices will result in considerable further development.

Production averages are falling steadily from week to week at Smackover, and serious declines have occurred at El Dorado. Daily averages at Stephens remain practically unchanged.

An increase in daily average production is reported from the Irma field in Nevada County this week. Approximately 125,000 barrels of heavy gravity oil is now held in earthen storage there awaiting marketing facilities. Marketing probably will prove the greatest difficulty to be presented to producers of Irma crude, as its low gravity precludes efficient handling through pipe lines. However, a tram road is now being extended into the field from Reeder, a distance of 11 miles, to connect with a branch of the Missouri Pacific. This doubtless will afford an outlet by tank cars.

New Elevator Support and Release

(Patented)

Stop Lifting Your Tubing to Make Your Kick-off!

Note Drawing No. 1 with elevator on top. The operator applies the brake. Push handle to right.

Note position of tool in Drawing No. 2. String of tubing hanging on pulling machine. Take Elevator off.

Write for complete details

Manufactured by

Safety Pulling Machine Company

Drawer A **Independence, Kansas**

Snowed In, Extensive Exploration Plans For Spring Only Oil Activities in Canada

Calgary, Alta., Jan. 21.—With drilling operations in Western Canada at a virtual standstill owing to severe weather, plans are taking definite shape for a widespread revival of activity in the spring.

These plans chiefly center about the Irma-Wainwright field of East-Central Alberta, where both gas and heavy oil have been discovered. British Petroleums, Ltd., of Vancouver, which developed the heavy oil in its No. 2 well, is reported getting ready to put two rotary drills to work in the spring. Besides its own tests, arrangements are being made for six other tests to be put down on the British Petroleums, Ltd. leases on a royalty basis by other companies.

Irma Oil & Development Company is already down some distance with a test close to Irma. A similar test, started near Wainwright by the Wainwright Oil & Development Company, will be finished by the General Oil & Development Company of Vancouver, B. C., which is moving in a drilling outfit. Both the local companies are interested in developing a gas supply for their respective communities, in addition to prospecting for oil.

The Spartan Oil Company of Vancouver, B. C., financed by English capital, and which has done some drilling in British Columbia near Vancouver and in the Montana fields, is reported leasing territory for a test near Wainwright. The J. O. Williams syndicate of Calgary are planning to drill two miles east of the British Petroleums' No. 2. The Crown Oil Company of Edmonton will drill one, and possibly two, tests south and east of the British Petroleums wells.

The outlook is not so bright in the Sweetgrass area, near the border. There the Canadian Oil & Refining Company (Rogers-Imperial) test is down 1,700 feet and snowed in; this test will continue work the coming season till conclusive results are secured. The merger of local oil companies financed by English and Australian capital with a view to definitely completing at least one test on the Quarantine Reserve apparently includes all, or practically all, the unfinished tests there. According to the latest information options, good until February 15, were given by the Coutts-Sweetgrass Oils (McLean), Lethbridge Oils (Baalim), Boundary Oil Company (McCullough-Patterson) and the Moodie syndicate, the latter with four unfinished tests; and it is probable that the Border Oils, Ltd., is also interested. Whether the merger will go through or not is not likely to be known until the middle of next month; but if it does at least one test will be actually caried to a conclusive depth.

The latest development in northern Alberta is a plan by local oil interests to utilize the large waste gas production from the various wells in a combined gasoline absorption and carbon black plant. Some drilling was done last season in this area by the San Joaquin Oil Company (Williams syndicate) near Three Creeks, and the Victory Oil Company near Peace River town, but neither test has yet secured definite commercial production.

Imperial Oil, Ltd., will next year drill at least two tests in the Canadian West. One crew will be sent into the Fort Norman area to either deepen the discovery well or drill a new test close to it. Another new test will be started in Coalspur district, in the foothills west of Edmonton, where a previous test was abandoned last year owing to drilling difficulties at comparatively shallow depth.

In Ontario, deep drilling operations are making slow progress. The feature of the week is the location of a new deep test, to be drilled through the Trenton limestone, by Eugene Coste & Co. Ltd. on lot 19, concession 7, Tilbury East township. Drilling will start almost immediately. The Glenwood-Shanks deep producer in Romney township, west of Port Alma, is installing a gas engine for a capacity test to start next week. Union Natural Gas Company number 248, Truckenbrod, east of Port Alma, is still reaming, but next week expects to set casing on the Trenton limestone. Union No. 249, Mancell farm, Tilbury East, is drilling at 1400 feet. In Elgin county, the Dominion Natural Gas Company No. 6 test for gas near Lakeview is shut down, likely till spring, owing to a difficult fishing job.

Stay Getters!

OLD DOC SALVADOR declares that he grew to young manhood with all the earmarks of a weakling. But the hard knocks of adversity made a man of him, and no one can deny that the job has been well done.

There's a peculiar analogy between sucker rods and human beings. Hardship emphasizes the good in a few and brings out the bad in many. Old Doc says that while all sucker rods are meant to be oil getters, only Axelson Rods are guaranteed to be Stay Getters!

And it's a fact that the punishment to which all sucker rods are subjected, particularly in deep wells, seems merely to call out reserve strength in Axelson Rods. They do not break. They do not crystallize. There is no apparent fatigue, even after long continued use.

We recommend that Axelson Rods be tried out in your most troublesome well, so that the truth may be established beyond controversy.

Dreadnaught and other Rotary Equipment—Complete Cable Tool Equipment—Reid Gas Engines and Powers—Donovan Boilers—Roebling Wire Lines—Whitlock Cordage—F-R Electric Light Plants—Axelson Working Barrels and Sucker Rods—Rensselaer Valves—National Transit Pumps—Jones and Laughlin Tubular Goods—Ratigan Beam Hangers, Sure Grips, etc.—Camel Hair Belting—F-R Drilling and Pumping Service Belting—Warren Steam Engines, etc.

In Oil Field Equipment—the Most HUMAN Organization in America.

Frick-Reid Supply Co.

Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi—Stores Everywhere

Exner-Dodge

The

"Silver"

Line

of

Sterling Quality

No second-hand Pipe can find its way into Exner-Dodge products. Only new material throughout is used.

Two-in-one Packers
Regular Anchor Packers
Bottom Hole Packers
Disc Anchor Packers
Screw Anchor Packers
Special Gas Packers
Disc Wall Packers
Baby Bottom Hole Packers
Pony Packers
Cave Packers
Dresser Packers
Lead Bottom Hole Packers

Swaged Nipples
Bull Plugs
Improved Swabs
Packer Rubber and Parts

THE
EXNER-DODGE
PACKER COMPANY
Coffeyville, Kansas

Union Well Log

(Continued from page 37)

the Union well, which has created considerable excitement in Colorado.

	Top	Bottom	Thickness
Mesaverde			
Brown gumbo	0	8	8
Quicksand, water	8	20	12
Brown gravel	20	30	10
Brown sandy shale	30	38	8
Yellow clay	38	45	7
Blue shale	45	65	20
Gray sandy shale	65	170	105
Gray shale	170	455	285
Gray sandy shale	455	475	20
Gray shale	475	540	65
Gray sandy shale	540	570	30
Sandy formation with water about 2 barrels per hour)	570	585	15
Gray shale	585	875	290
Gray sand, water	875	967	92
Gray shale	967	1015	48
Gray sandy shale	1015	1075	60
Gray shale	1075	1095	20
Gray sandy shale with streaks of sand	1095	1120	25
Gray shale	1120	2148	128
Hard shell	1248	1253	5
Hard shale	1253	1460	207
Gray shale	1460	1720	260
Soft gray shale	1720	1840	120
Gray shale	1840	1950	110
Hard gray shale	1950	2255	305
Gray shale	2255	2400	145
Gray sandy shale	2400	2415	15
Gray shale	2415	2440	25
Sticky sandy shale	2440	2530	90
Brown sandy shale	2530	2555	25
Gray shale	2555	2566	11
Hard dark shale	2566	2574	8
Hard gray shale	2574	2600	26
Steele			
Stocky gray and sand shale	2600	3030	430
Gray shale	3030	3060	30
Sandy gray shale	3060	3220	160
Gray shale	3220	3230	10
Gray shale with thin sandy strata	3230	3260	30
Gray shale	3260	3445	185
Hard gray shale with shells	3445	3485	40
Hard gray and brown shale	3485	3570	85
Niobrara			
Limey gray shale	3570	3730	160
Sharp gray sand	3730	3733	3
Sandy gray shale	3733	3775	42
Dark and gray shale and shells	3775	3855	80
Dark soft muddy shale	3855	3875	20
Soft dark gray shale	3875	4010	135
Hard gray shale	4010	4040	30
Gray shale	4040	4120	80
Soft dark gray shale	4120	4225	105
Hard gray shale	4225	2235	10
Gray shale	4235	4285	50
Benton			
Top of sand, gas	4285		

Magnolia Petroleum Co. Buys More Mirando Land

Mirando City, Texas, Jan. 23.—Purchase of seven 20-acre tracts located in the Ochoa Pasture, by the Magnolia Petroleum Company, was the outstanding feature of the past week in this district. This acreage belonged to C. E. Wolcott & Company, of Laredo, and checker-boards what is commonly known as the Wolcott pool. The blocks are 40 to 46 inclusive. Block 46 has one producing well, and the acreage embraces territory along the escarpment in Webb county, the latest producing area in the Mirando district.

Andrews Petroleum Corporation is rigging up to spud in on a location on the line of Webb and Zapata counties. The well is to be located on Block 1, of survey 125, below the Edgington pool north of the Mirando discovery field.

Andrews No. 1, in Edgington pool, Block 50, pulled in the derrick Monday, causing a delay in pulling the liner. Carnahan No. 9, a workover, was given a test. This well missed the light gravity sand at 1937 feet and preparations are being made to drill deeper. The well was brought in more than a year ago and has been a profitable producer.

A new derrick for Carnahan No. 12 was built last week, the old derrick and rig having been burned a few weeks ago.

After several days of effort, the crew working to shut in the Carolina-Texas No. 4 Barnsley, succeeded in bringing the well under control. Work on this well had to proceed slowly because of the great danger of fire.

Mid-Continent Ass'n Favors Safety Work

Tulsa, Okla., Jan. 23.—Organization of the machinery with which to carry on safety work in the five states representing the Mid-Continent district, will be perfected on January 26, in Dallas, Texas. A meeting has been called for that date. Notices have been sent out urging every company to send representatives to this meeting, to assist in the work of organization. The Executive Committee of the Mid-Continent Oil & Gas Association has voted favorably upon the proposition of the association joining in safety work. It now becomes necessary to ascertain how much support there will be for the work, and also to obtain as many members as possible for the safety section.

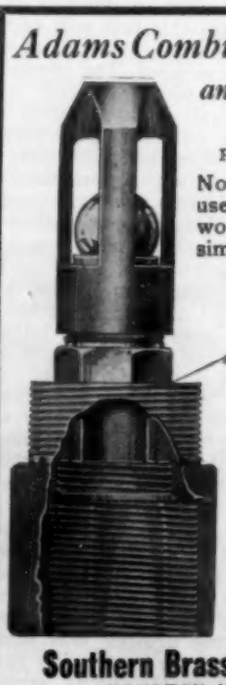
Application cards have been sent out and it is believed many new members will be secured.

SOUTH TEXAS PIPE LINE

Houston, Texas, Jan. 21.—The Three Rivers Pipe Line Company has been organized to transport the crude produced in the Three Rivers oil field in Live Oak County, and has a four inch line extending from Callihan to the San Antonio, Uvalde and Gulf railroad. This line is capable of handling about 4000 barrels of oil daily, and is approximately 14 miles in length.

Adams Combination Cuff and Standing Valve

Patent No. 1353303



Not necessary to use special cuff on working barrel—simply take a top cuff off of any old barrel and substitute for bottom cuff, then screw hydraulic valve in place.

Made of bronze with steel crown ball and seat.

Has a salvage value
Sizes 1¾, 2¼, 2¾, 3¼ inches

Manufactured only by

Southern Brass Mfg. Co.
HOUSTON, U. S. A.

Rising Crude Market Starts Active Drilling in North Texas Districts

Wichita Falls, Texas, Jan. 22.—The widespread drilling campaign being conducted by independent operators and a few of the major companies in Archer County, as a result of the continued upward trend in the crude market, gives promise of the entire county being relieved of most of its flush production within the present year. Wildcat tests are almost blanketing the county while the present producing areas are being developed at a fast rate. The 1600 foot sand pay underlying the L. F. Wilson ranch in the so-called Wilmot-Wilson pool section of the county, is at present receiving the bulk of the attention of the operators. This area has received numerous extensions to its productive limits in the past two months to the east, northeast and southeast, and leases are being drilled up in a comparatively brief period after being proven for production, as rotary equipment is used and only one string of casing is necessary, making it possible to complete a well within three weeks.

Indications of another pool for Archer County were promising early this week when the wildcat test of Burns & Maxson on the L. F. Wilson ranch, located more than three miles southeast of the Sunshine pool and about half a mile east of the Little Wichita River, drilled one foot of oil sand to 1547 feet, resulting in a good showing of oil. Casing is being set to make a test before drilling deeper into the pay. This test is in the northwest corner of a 35 acre lease in block 107, A. T. N. C. Lands. The east edge of the Wilmot-Wilson pool was extended a short distance late last week when Maer, Standiforth & Gwynn's Wilson 1 drilled into shallow pay at 1380 to 1385 feet. The well started flowing by heads at the rate of more than 200 barrels daily, and is an unusually large producer for the upper sand, which has previously been passed up for the 1600 foot pay. Since this well is on an outside location a number of tests are being started further to the east.

The Shappell district along the Wichita-Archer County line and north of Holliday reports a number of tests on the sand, and several minor extensions to the present productive limits of the pool are assured, although the small amount of sand pay is making it difficult to complete a well without going into water. This district is producing from the 1800 foot horizon, and created somewhat of a flurry in lease buying about six weeks ago when the Shappell Oil Company's Jackson 1 pumped at the rate of 330 barrels daily. About five miles due west of this area and north of the Wichita-Archer County line, Roy I. Carter and others' K. & K. 3 is reported good for 65 barrels from sand at 1797-1803 feet, and indications are that the 1800 foot sand extends over a long distance, with a few breaks in the pay.

Completions for Past Week in U. S. Fields

Kansas

Company, Well, Location	Initial Production Bbls.	Depth
Butler County—		
Empire Oil & Gas Co. Clark 2, SWc NE NW 20-27-6	7	2757
Cowley County—		
Wilson & Martin Eastman 1, SWc 5-31-6	250	2865
Buffalo Trust Co. Kukuk 7, SWc NE 24-32-4	75	2366
Twin States Hilbert 1, SEc NW 6-32-5	¶	2482
Elk County—		
Ohio Fuel Co. Wheeler 1, C SE SE 28-29-9	¶	1507
Greenwood County—		
Pulaski & Simon Barnard 1, SEc NW 19-22-12	*	2491
Roger et al Bratton 1, SWc NE NE 14-24-9	700	2173
Miller & Henderson Bratton 1, SEc NW NW 14-24-9	*	2400
Sumner County—		
Brady Bros. Turpin 1, SWc 13-33-2	*	3646

Oklahoma

Company, Well, Location	Initial Production Bbls.	Depth
Beckham County—		
Sayre O. & G. Co. Goldsmith 1, C E L SW SE NE 15-9-23w	*	3070
Magnolia Pet. Co. Montgomery 1, SEc NE 15-9-23w	*	3118
Ezzell 1, NEc 36-9-24w	*	3924
Carter County—		
L. J. Woodruff's McFarland 1, C SE SE SE 7-3-3w	*	3250
Magnolia Pet. Co.'s Tucker 4, C SE NE NW 25-2-3w	1000	2273
Tucker 1, C SE SW SE 25-2-3w	*	3270
Kaufman Oil Co. McNaughton 1, C SE SW SE 31-2-2w	70	2658
Creek County—		
Cumberland Pet. Co. McIntosh 4, C S L SW SW 23-15-10	30	3078
Wilcox O. & G. Co. Harjo 6, NWc SE SW 35-16-8	800	3094
Roland Oil Co. Alec 4, C NE NW SW 2-15-8	*	3130
Kay County—		
Roxana Pet. Co. 1, SW NE 4-27-5	850	2909
Kiowa County—		
Kiowa Dev. Co. School 2, NWc NE 33-6-20w	*	991
Noble County—		
Comar Oil Co.'s Gaume 12, C SE SW NE 2-24-1w	250	2550
Gaume 13, SWc NE SW NE 2-24-1w	144	2560
Okfuskee County—		
T. McMann's Cobray 1, NWc SE 29-11-11	*	2740
Okmulgee County—		
H. G. Fair et al Thompson 4, SEc NE NE NE 1-12-11	50	2565
Waite Phillips Rickards 1, SEc SW SW 14-15-11	50	2843
Hiram O. & G. Co. Adams 1, NEc SW 3-15-11	10	1872
Troy Oil Co. Burrow 12, NEc 2-15-11	30	1830
Santuna Oil Co. McWilliams 2, NWc 1-15-11	20	1824
Cook & George J. Hawkins 2, SWc NW NW 5-15-15	*	2331
W. N. Harsha G. McDaniel 2, C E L SW NW 4-15-15	*	1500
A. W. Cline D. Harrison 1, NEc SE NW 19-15-14	¶	1704
F. A. Gravel Wiley 2-A, C E L SW NE 29-13-14	*	1820
Osage County—		
Tidal-Osage Oil Co. 34, SEc NW SE NW 34-22-10	3960	2315
Phillips Pet. Co. 4, NEc 9-27-5	400	2942
1, SE NE 9-27-5	608	2962
9, SE NW 23-27-5	400	3029
Skelly Oil Co. 12, C SE NE SW 23-27-5	300	3059
Gypsy Oil Co. 14, C SE NE NW 24-27-5	500	2995
7, NE SW NW 23-27-5	340	3091
11, SEc 22-27-5	1271	2968
George Boles 1, SE NW 4-27-5	1250	2911

TRADE MARK
KEYSTONE
REGISTERED U. S. PATENT OFFICE

Improved Deep Well Rig

EMBODIES THESE VALUABLE FEATURES

Friction Tool Hoist—Casing Reel—Indestructible Steel Sills—Keystone Patented Spudding Device—V-Friction Brakes, Patented—Babbitted Bearings throughout.

This machine is new—modern, complete, the product of an old and established concern. It is backed by 35 years of experience in the manufacture of portable drilling rigs and a world-wide reputation.

We are building three sizes: No. 27, for 2500 feet; No. 32, for 3000 feet; and No. 35, for 3500 feet depth.

Machines can be seen in various parts of the Kansas, Oklahoma and Pennsylvania fields. Let us wire you where to find one. BULLETIN 302 and prices on request.

KEYSTONE DRILLER CO.
BEAVER FALLS, PA.
Branch Office and Plant
Joplin, Mo.

Company, Well, Location	Initial Production Bbls.	Depth
Celestine Oil Co 2, NE SW NE NW 30-26-10	*	2108
C. W. Titus 7-A, SE NE 35-23-10	*	2330
Owen Osage 266, C SE NE SE 10-27-11	¶	1925
267, C N L NW SE 28-28-11	¶	1821
268, NW SE NW 9-22-11	¶	2165
Markham-Breene 2, NW SW SW NW 23-21-10	250	1651
Oklahoma Nat. Gas Co. 635, NW SW NE 28-20-12	¶	1294
Stephens County—		
Magnolia Pet. Co. Marx 1, SEc NE NE SW 13-2-8w	¶	1250
Mid-Kansas Acct. 3, Bristow 4, NEc SE SE SE 18-2-7w	*	2235
Waggoner County—		
Mays Bros. Presley 1, C NE NW 7-18-15	5	1296

California

TORRANCE

Company, Well, Location	Initial Production Bbls.	Depth
Beaver State 1	800	3800
Petroleum Midway 11	700	3700
Bush--Vorheis Schatz 3	600	3818
Dabney-Delaney 1	600	3680
Geo. F. Getty 8	800	3680
9	500	3795
Universal Consolidated 7	550	3775
International Drilling 1	600	3777
Lang Wall 4	450	3780
Selby & Root 3	1000	3775
Hubb Oil Co. Cook 1	150	3760

LONG BEACH

Petroleum Midway Griswald 2-1	1500	4861
Shell Wells 1	1400	4505
W. R. Ramsey 2	600	5000
General Petroleum Jones	1650	4900
Foste 65	2500	4939

SANTA FE SPRINGS

Company, Well, Location	Initial Production Bbls.	Depth
Standard Weisel 10	100	4321
Shell G. H. N. 7	400	4635
Slusher 7	30	4633
Thompson 4	900	4503
Geo. F. Getty 8 (wo)	200	4700
General Pet. Co. 15	450	4650
16	450	4635
Petroleum Midway Steinly 2	40	4575

HUNTINGTON BEACH

Standard G-2	80	4830
Petroleum Midway Towers 5	100	4800
Shell's Davenport 4 (wo)	100	4387
Globe Petroleum 1 (wo)	135	4750

MONTEBELLO

Whiston Bicknel 1	100	4405

Texas

EASTLAND-RANGER

Humble Oil & Ref. Co. Lanier 1	*	3020
Nixon Oil Co. Parrock 2	*	1940
The Texas Co. L. A. Hightower 4	55	1229
Turner & Clayton Rio Bravo 1	70	3335

DESDEMONA-GORMAN

Kokomo Pet Co. Harris 2	¶20	3140

STEPHENS COUNTY

Humble Oil & Ref. Co. A. J. Jones 6	370	3205
McLain et al Gin Lot 1	*	3300
Texas Fidelity Oil Corp Parks 1	¶4	2135
Texas Pacific Coal & Oil Co T. L. Rogers 1	600	3245

CORSICANA-POWELL

Western Oil Fields (Mutual) Corp. Boyd-Howell 8	300	2931
Simms Oil Co. W. S. Kellum 3	400	2966
S. J. Taylor et al Jackson 1	*	3030
E. L. Smith Oil Co. S. D. Ramsey 5	70	1530
Yoder et al B. W. Harvard 2	150	2923
McMan Oil & Gas Co. Chapman-Anderson 7	500	2880

BURKBURNETT

J. V. Henley Ward & Todd 1	*	1000

SOUTH ELECTRA

Bass & Dillard's W. T. Waggoner 6	*	1917
Magnolia Pet. Co. S. B. Burnett 1-A	*	2165
Simms et al S. B. Burnett et al 15	*	1990
Texhoma Oil & Ref. Co. W. T. Waggoner 27-A	*	1970
Noel & Erwine W. T. Waggoner 1	*	2075

K-M-A DISTRICT AND IOWA PARK

Eureka Drlg. Co. T. F. Mitchell 2	*	440
Roy I. Carter K. & Kempner 3	100	1803
Scott & Gilliland W. H. Chilson 1	140	1820
Ross & Fields T. F. Mitchell 5	25	430

ARCHER COUNTY

A. B. C. Oil Co. Ferguson 2	*	2015
Boller & Wolf & Minchew H. Wilmot 3	100	1600
Chenault et al J. T. Richardson 2	90	1360
Dorain et al L. F. Wilson 2	175	1604
F. & H. Synd.'s W. P. Ferguson 14-A	50	1466
Fort Ring Oil Co. W. P. Ferguson 7	20	1750
Hudspeth et al Abercrombie & Taylor 2	*	1100
Humble Oil & Ref Co. G. T. Netherton 2	25	1580
Kentucky Oil Corp. L. F. Wilson 3	25	1604
Litchfield-Coleman et al W. S. Scruggs 1	60	1343
Murchison & Fain L. F. Wilson 2-B	400	1602
Murchison & Fain L. F. Wilson 1-C	500	1596
Oil Investment Co. J. E. Parrish 4-B	*	1600
Panhandle Ref. Co. W. F. Parrish 1	300	1600
R. M. F. Oil Co. L. F. Wilson 2	*	1630
L. F. Wilson 1-D	1000	1594
L. F. Wilson 8-B	55	1604
Riner & Bailey L. F. Wilson 2	25	1618
Sunshine State et al Carter Bros. 5	4	1587
Sunshine State Oil & Ref Co. Carter Bros. 14	40	1585
Shaw & Rathke K. & K. 10	25	1580
Swastika O. Co. J. T. Richardson 2-B	*	1400
Dr. Wallace K. & Kempner 23	80	1765
White & Rule W. F. Woodrum 2	*	1400

SPECIAL TANKS TO ORDER

The Maloney Tank Manufacturing Company is adequately equipped to manufacture special sizes of storage or flow tanks of bolted construction. These follow the same construction as our standard tanks, possessing our patented offset seams and joints, and being made of Keystone Copper Steel.

The flow tank illustrated above is one manufactured for use in the California district. It is of 1500-bbl. capacity.

Allow us to quote on your requirements.

MALONEY TANK MFG. CO.

Offices and Factory: Tulsa, U. S. A.

60 to 3,000 Bbls. Inclusive

Prompt, Dependable Export Service

MALONEY PATENTED BOLTED COPPER-STEEL

MALONEY

THE LAYNE

PATENT
Lead Cone and Canvas Ratchet
PACKER
for the Oil Fields

has been proving its supremacy for more than 15 years by giving

continuous
satisfactory
service

—1—
Left hand buttress threads, shallow cut, do not weaken pipe—prevents packer from uncollapsing.

—2—
The canvas consists of strong and durable duck, compressed to iron-like hardness, insuring a nearly perfect pack.

—3—
The lead insures a good joint on the pipe and increases packing capacity—lessens danger of bursting pipe.

Wire, phone or write US your Packer and Strainer Needs

THE LAYNE & BOWLER COMPANY
HOUSTON, TEXAS FACTORIES MEMPHIS, TENNESSEE

Land Office Grants Permits to Operators

Washington, D. C., Jan. 21.—The United States land office reports several permits granted to oil operators in the Mid-Continent and other sections for large prospecting areas in different parts of the country.

H. E. Daulton of Tulsa has been awarded a lease on 2560 acres in Utah and C. S. Waley of the same place has been given a lease on four sections in New Mexico. Other areas leased include 2560 acres in Utah, some 2,537.92 acres in Wyoming and 2560 acres of unsurveyed land in Utah.

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co.'s Middaugh 1	4	....
Weston 70	4	....
White 1	3	....
Fuller & Co. Williams 1	4	....
F. M. Brooks Brooks 1	4	....
F. Baldwin Sprague 1	4	....
McDowell Andrus Bingham 1	4	....
M. Hannon Drake 1	5	....
Oaks & Diament Bingham 500 acre tract 18	4	....
Wilson & Patton Slater 1	3	....
Tidewater Co. Bingham 300, tract 5	3	....
Kennedy Co. Kennedy 95	3	....
E. Berry Berry 23	3	....
Rhodes & Co. Emerson 1	2	....
Gallagher & Co. Corwin 1	3	....
Taft & Stephan Maldrum 1	3	....
C. H. Corwin Corwin 1	3	....
Bucher & Co. Chamber 1	3	....
Hazlewood Oil Co. Bingham 1	2	....
Baldwin & Moore Bingham 1	2	....
Venango County—		
R Calvert Calvert 6	4	....
Thompson & Rice Rice 8	3	....
T. W. Parson & Co. Parson 13	2	....
N. F. Hovis & Co. Welton 1	2	.
Welton 2	2	....
Suhr & Co. Dempsey 8	2	....
Clarion County—		
Kenemuth & Co. Kenemuth 8	¶1	....
Natural Gasoline Co. Kable 2	¶1	....
Butler County—		
Elliott & Co. Duncan 2	3	....
J. S. Walker Moore 1	4	....
M. Finnessy Shaner 15	3	....
Greene County—		
Willa Oil & Gas Co. Strossnider 1	¶3	....
J. H. McDermott & Co. Lemley 1	5	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
Bolivar Field—		
Piper Bros. Beaver 1	5	....
Allegany County—		
Hannifan & Co. Hannifan 1	2	....
Dumming & Son Dumming 1	3	....
Producers Oil Co. Prosser 1	2	....
N. K. Wilson Childs 1	2	....
Phillips & Co. Divitt 1	2	....
Bradley & Carter Canfield 1	2	....
Birtell & Co. Birtel 1	2	....
Trunkel & Co. Trunkel 1	2	....
Empire Co. Empire 1	3	....
B. Maitland Maitland 1	2	....
Dusenberry & Co. Dusenberry 1	2	....
Sawnett Co. Sawnett 1	3	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
Johnson-Magoffin Counties—		
United Fuel Gas Co. W. Howard 5	20	....
Arnett & Patrick J. H. Arnett 9	20	....
Eastern Kentucky O. & G. Co. G. Blanton 2	15	....
Adams & Caudill J. Howard 1	*	....
Warren County—		
E. M. Treat & Co. S. Smith 17	25	1053
P. H. Lavelle W. R. Hinton 3	20	1088
Kopler & Co. Hugh Hill 1	5	589
Owensboro District—		
Panther Creek Oil Co. Robt Miller 4	20	740
Newton Oil Co. & Daugherty J. Morrison 4	6	720
Allen County—		
Dobie & Co. Clayburn 1	1	....
Unknown Parties Stafford 1	*	215
Metcalf County—		
A. W. Richardson G. F. Cassidy 4	¶3	....
Cave City Oil & Gas Co. Beard 1	¶2	....
Owsley County—		
Petroleum Exploration Co. H. C. Manous 2	¶1¼	....
Tom Lynch 1	¶1	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Washington County—		
Ohio Fuel Supply Co. F. Gossett 1	¶¼	....
Hovis & Co. R. Edwards 2	¶2	....
Bedellion & Co. E. H. Goodman 1	*	....
Otto Becker & Co. A. H. Rosenbaugh 3	2	....
Meister & Co. Theodore Daniels 1	*	....
Monroe County—		
Simmons Oil Co. V. Handschumaker 4	10	....
Carter Oil Co. R. E. Griffin 1	¶1	....
Jefferson County—		
Wolf, Beren & Co. North Hill Land 2	2	....
Noble County—		
I. C. Shalcop R W Dye 1	*	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Hocking County—		
Arkansas Fuel Oil Co. Coe Heirs 5	15	....
Pure Oil Co. W. G. Stout 1	¶2	....

A

DEVIL'S STEEL HAND

CLEANS PLUGGED HOLE IN 14 HOURS

OTHER TOOLS FISHED 8 DAYS and FAILED

P. W. Fusselman, of Claremore, Okla., was down 1,060 feet in a 6¼ inch hole when he lost the entire string of tools. Four slips from the combination socket were also lost in the hole. After fishing eight days without any success the hole was declared plugged.

Our Tulsa Rental Branch offered to take the fishing job on a guarantee basis—to clean the hole or no pay. The offer was accepted and a 5 3/16" DEVIL'S STEEL HAND was placed on the job.

IN 14 HOURS THE HOLE WAS CLEAN, SLIPS AND ALL!

Think this over before you start on your next fishing job.

BROWN WELDING & MACHINE COMPANY

Main Office and Factory
BRECKENRIDGE, TEXAS

Rental Branch; 310 E. 3rd St., Tulsa, Okla.

DEVIL'S PITCHFORK

DEVIL'S STEEL HAND

Company, Well, Location	Initial Production Barrels	Depth
Medina County—		
J. F. Hogan & Co. W. Anderson 4	*	310
NORTHWESTERN OHIO		
Mercer County—		
Celina Pet. Co. Brehm Bros. 1	30	1410
Brehm Bros. 2	40	1409
John Brehm 1	20	1414
Hancock County—		
Harpst Bros. H. Schwinn 9	60	1362
Ohio Oil Co. James Guinn 19	10	1347
Wood County—		
George E. Grant Grant 4	25	1453
West Oil Co. A. Schauweker 4	5	1429
Hardin County—		
Schmidt & Co. Edward Merty 1	¶¼	1430
Smith Oil Co. A. J. Harpster 1	¶¼	2250
Van Wert County—		
Stanley Oil Co. Fred Rigdon 1	15	1317
ILLINOIS		
Clark County—		
Ohio Oil Co., S. N. Brossman 11	35	1403
WEST VIRGINIA		
Cabell County—		
Aetna Oil & Gas Co. C. A. Davis 1	¶½	....
Commercial Gas Co. M. L. Lucas 1	¶1	....
Duty Oil & Gas Co. T. H. Duty 1	¶3½	....
J. H. Harshberger & Co. Andy Connor 4	*	....
Calhoun County—		
Euclid Oil & Gas Co. H. O. Lamb 1	5	....
McIntosh & Co. E. Wilson 1	¶3½	....
Richter Oil & Gas Co. B. S. Raybuck 5	¶3	....
Braxton County—		
Simmons & Co. R. O. Dennison 1	¶1½	2890
Philadelphia Oil Co. H. M. Hamrick 1	5	....
Roane County—		
Empire Pet. Co. Wm. Hunt 1	5	....
United Fuel Gas Co. R. K. Ogden 1	¶3	....
Pleasants County—		
B. E. Crippen Prescott Racer 1	2	....
Judas Keifield O. W. Gard 4	2	....
Harrison County—		
Philadelphia Oil Co. Mary L. Young 1	¶1	2972
Bridgeport Oil & Gas Co. C. G. Gawthorp 1	¶4	....
Ritchie County—		
Hays & Roberts W. W. Lawrence 3	¶2	....
Carnegie Nat. Gas Co. A. L. Smith 1	¶2	....
Marion County—		
S. N. Elliott L. A. Orndorff 1	5	....
Doddridge County—		
Imperial O. & G. Products Co. W. A. Mason 1	5	....
Marshall County—		
Natural Gas Co. of West Virginia W. Hughes 1	¶4	....
Putnam County—		
Dunbar Gas Co. C. Gross 1	¶4	....
Wetzel County—		
Manufacturers Light and Heat Co. S. L. Wade 1	¶3	....
Tyler County—		
Knowlton Bros. H. C. Williamson 1	*	....

Arkansas

Company, Well, Location—	Initial Production Bbls.	Depth
Stephens Field, Columbia County—		
Pete Hoffman Buffington 1, 24-15-20	25	2156
Irma Field, Nevada County—		
Smitherman & McDonald Wallis 1, 11-14-21	75	1208
El Dorado Field, Union County—		
Bergeret et al's Snyder 1, 2-19-15	*	2655
Smackover Field, Ouachita County—		
El Dorado Union Oil Co. Hughes 2, 28-15-16	50	2261
Gulf Ref. Co. Fincher 4, 28-15-16	15	2250
Werner A-1, 36-15-17	100	2281
Majestic-Smackover Oil Co. McElroy 2, 29-15-16	250	2285
Simms Oil Co. Reynolds 1, 32-15-15	¶25	2280
Sure Oil Co. Fee 3, 30-15-16	145	2265
The Texas Co. Solmson A-3, 29-15-16	65	2288
Woodley Pet. Co. Patton 2 32-15-16	200	2254
Smackover Field, Union County—		
Standard Oil Co. Alphin 10, 11-16-15	200	1990
Lingelbach 2, 22-16-15	300	2029
Saxon B-3, 5-16-16	90	2295
Weissman Oil Co. Harrell 2, 17-16-15	300	2116
Total, 12 wells	¶25-1715	

Louisiana

Company, Well, Location—	Initial Production Bbls.	Depth
Bellevue Field—		
R. O. Roy & Co. Scanlan 24, 15-19-11	40	356
Scanlan 25, 15-19-11	50	366
Total, 2 wells	90	
Monroe Gas Field—		
Texas-Louisiana Producing & Carbon Co. Fee 3 4-19-5e, Ouachita Parish	¶16	2254
Union Power Co. Union Saw Mill Co. A-6, 32-21-4e, Union Parish	¶16	2088
Total, 2 wells	¶32	

FARRAR & TREFTS STEAM BOILERS

HAVE

Triple Riveted Butt Strap Joints

—and—

Double Riveted Lap Joints

A. S. M. E. Code

60 years experience has taught the makers of Farrar & Trefts Steam Boilers the value of excess strength in construction.

F. & T. boilers are made double-strength throughout. Lap joints are double riveted. Butt strap joints are triple riveted. Bracing is done with exceedingly strong, short weldless braces.

Specify Farrar & Trefts Steam Boilers for your next purchase.

Phone, Write or Wire

D. F. CONNOLLY AGENCY, Inc.

623-24 Kennedy Bldg., TULSA, OKLA.

Phone Osage 1929 Night Phone Cedar 2798

MACWHYTE WIRE LINES BELTING H. & A. BULL ROPES

BOILER REPRESENTATIVES

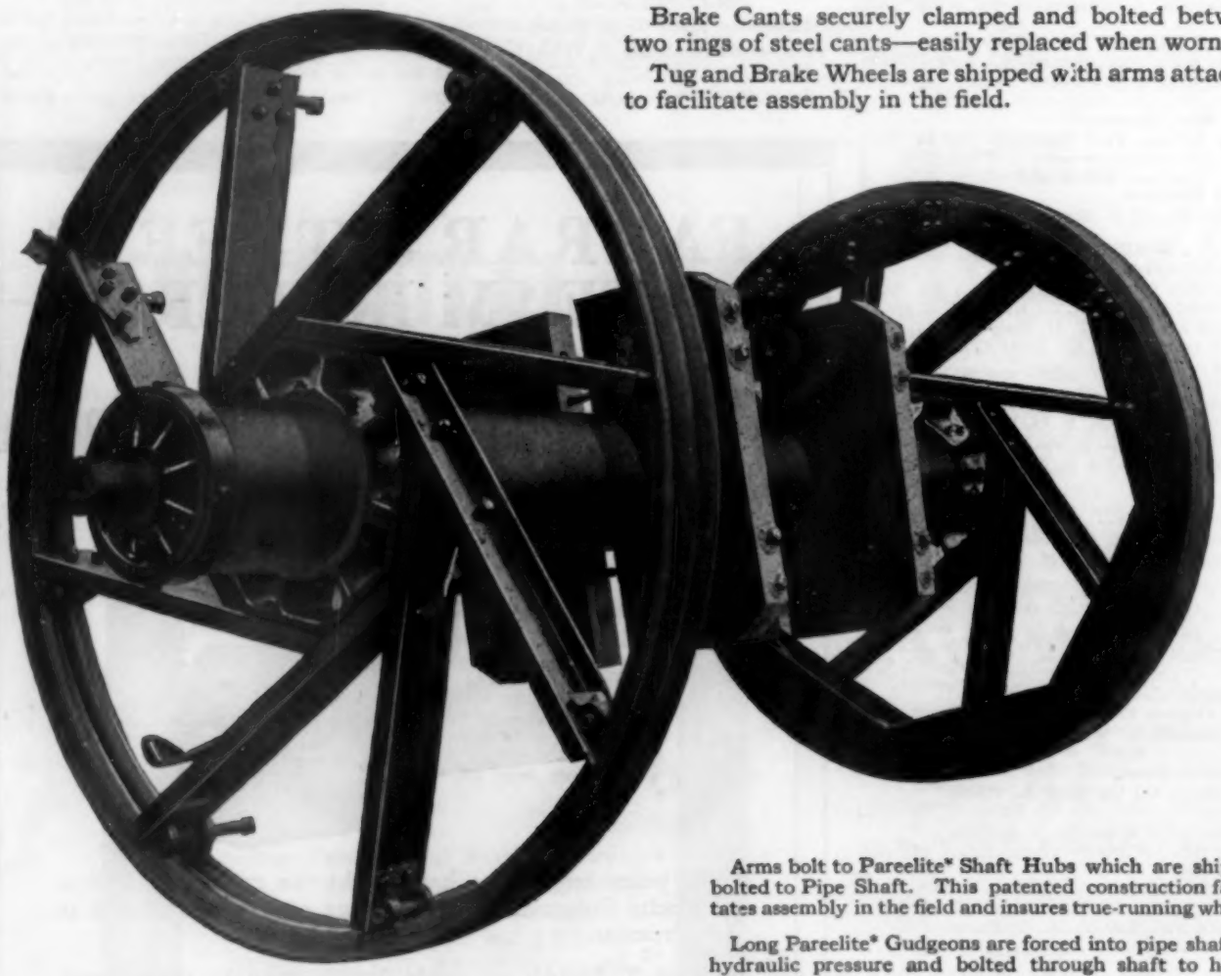
Los Angeles, Calif.—Hillman-Cooney, Inc., 408-9 Higgings Bldg.
Casper, Wyoming—Northwestern Supply Company.
Beaumont, Texas—Brooks Supply Company.
El Dorado and Smackover, Ark.—S. Bender Iron & Supply Company.
Shreveport, Louisiana—Oil City Iron Works, 204 Strand St.
Wewoka, Oklahoma—Colonial Supply Company.
El Dorado, Kansas—El Dorado Machine & Tool Company.
Fort Worth, Texas—Longhart Supply Company.

PARKERSBURG
METAL TUG
STEEL BULL WHEELS

"V"-Grooved Pareelite* Tug Rim affords positive traction.

Brake Cants securely clamped and bolted between two rings of steel cants—easily replaced when worn.

Tug and Brake Wheels are shipped with arms attached to facilitate assembly in the field.



Arms bolt to Pareelite* Shaft Hubs which are shipped bolted to Pipe Shaft. This patented construction facilitates assembly in the field and insures true-running wheels.

Long Pareelite* Gudgeons are forced into pipe shaft by hydraulic pressure and bolted through shaft to heavy gudgeon bands.

*Pareelite is a "High Manganese" metal—not cast iron—that will sustain a load of 4,320 pounds on arbitration test bar of American Society for Testing Materials, and with only 7/64 inch deflection at breaking point. It has an ultimate tensile strength of 33,680 pounds per square inch.

Parkersburg Metal Tug Steel Bull Wheels are made with standard length shafts and for 9-inch or 12-inch Brake Irons

Ask for detailed information

The PARKERSBURG RIG & REEL CO.

Main Office and Works, Parkersburg, West Virginia. ***New York Office,*** 30 Church St., Room 1510

California Representatives, BUCK & STODDARD
485 California St., San Francisco, Calif.; Box 720, Arcade Station, Los Angeles, Calif.

District Offices and Distributing Warehouses from which Parkersburg Service is available

TEXAS
*Houston
Breckenridge
Corsicana
Graham
Iowa Park
Mexia
Orange
Ranger

WYOMING
*Casper
‡Rawlins

LOUISIANA
*Shreveport
Haynesville

KANSAS
*Eldorado
Madison

W. VIRGINIA
Parkersburg
Clarksburg

OKLAHOMA
*Tulsa
Bristow
Drumright
Henryetta
Hominy
Okmulgee
Wetumka
Tonkawa
Wilson
Shidler

ARKANSAS
*El Dorado
Smackover
McNeil

MONTANA
Sunburst
†Winnett

*District Offices ‡Frick-Reid Supply Co. †Continental Supply Co.

Say you saw it in The Oil Weekly

Permits Granted and Locations for New Wells
(Arkansas—Louisiana—Texas)

TEXAS

ARCHER COUNTY—Kemnitz, Paxton & Payne's McCall & Sanderson 3,D. C. S. L. blk 22, 150 ft to N and 200 ft to E line. Lot Seven Oil Co.'s L. F. Wilson 1, Amer Trib sur blk 27 150 ft to S and W line. John Kimberlin's J. A. Bell 1, Clark & Plumb sur, 150 ft to N and E lines. Dobbs & Chamber's W. L. Andrews 1, G. C. Frarley sur 933 ft to N and 838 ft to E line. Sunshine State Oil & Ref. Co.'s N. J. Parish 4, SP Ry sur, sec 2, 300 ft N No. 1. C. N. Clark's W. S. Scruggs 1, G. P. Diggs sur, blk 2, 150 ft to N and E lines. S. Sebersky's J. H. White 1, Amer Trib sur, sec 11, 570 ft to N and 150 ft to E line. Underwood Drilling Co.'s L. F. Wilson 1, Amer Trib sur, blk, 29 150 ft to N & W lines. Fort Ring Oil & Gas Co.'s W. P. Ferguson 6, SP Ry sur, sec 1. P. F. Gwynn et al's J. H. Carter 8, Amer Trib sur, blk 93, 50 ft W No. 6. 66 Oil Co.'s L. F. Wilson 8, SP Ry sur, blk 4, 400 ft N No. 6. C. W. Boller's L. F. Wilson 2, Amer Trib sur, blk 27, 340 ft S No. 1. D. S. Golding's G. A. Lanster 1, BBB&C Ry sur blk 2, 150 ft to E and 1170 ft to S line. Ray, Massie & Featherston's L. F. Wilson 10, Amer Trib sur, 150 ft to S and W lines.

AUSTIN COUNTY—W. W. Johnson's E. Hein 1, San Felipe De Austin sur, 150 ft to N and E lines.

BEXAR COUNTY—Alamo Gas Co.'s J. B. Holt 3, W. W. Partican sur, 300 ft to S and W lines. Idaho Oil Co.'s W. B. Kilborn 4, Jas T. White sur, 500 ft N No. 1; 5, 500 ft N No. 3. Helvetia Oil Co.'s E. Smith 8, abst 294½, 550 ft E No. 6.

BRAZORIA COUNTY—Sinclair Oil & Gas Co.'s Masterson Irrigation Co. et al 1, A. Darst sur, 75 ft to S and E lines.

CALLAHAN COUNTY—O. C. Kinison's L. F. Cunningham 1, T&P Ry sur, sec 2, 150 ft to N and E lines. Godley Oil & Gas Co.'s J. H. Ogle 8, TE&L Ry sur No. 2297, 309 ft S No. 3. Finlayson & McDermot's Dan Forbes 1, TE&L Ry sur No. 2280, 200 ft to S and W lines. Dickey Oil Co.'s L. H. Qualls 7, TE&L Ry sur No. 2287, 300 ft E No. 6. Burleson Oil Co.'s W. M. Isenhouser 2, Bayland Asy sur, sec 1, 350 ft SE No. 1. Big Five Oil Co.'s Pruett 6, TE&L Ry sur No. 2278, 500 ft N No. 5. Cosa Oil Co.'s H. Wagley 9, D&D Asy sur No. 3, 300 ft S No. 8. Sirmans Oil Co.'s S. M. Eubanks 5, TE&L Ry sur No. 2279, 300 ft E No. 4; 6, 150 ft to S and E lines.

CALDWELL COUNTY—United North and South Oil Co.'s G. W. Proctor 1, Jno. Henry sur, 730 ft to W and 150 ft to N line; 2, 300 ft E No. 1; 3, 300 ft E No. 2. Grayburg Oil Co.'s G. W. Proctor 4, Jno. Henry sur, 280 ft SW No. 2.

CONCHO COUNTY—Dome Prod. Co.'s Mrs. C. M. Hartgrove 1, D. Schrader sur No. 349, 810 ft N and 150 ft to E line.

COMANCHE COUNTY—J. J. Gallegher's J. A. Mauney 1, H&TC Ry sur, 150 ft to S and W lines.

EASTLAND COUNTY—Texas Pacific Coal & Oil Co.'s H. Brashears 2, E. Finley sur, 200 ft to S and E lines. W. H. Harrison et al's V. M. Tidwell 1-B, W. H. Sargent sur, 200 ft to W and 300 ft to S line.

FORT BEND COUNTY—Gulf Prod. Co.'s B. Blakely 8, E. Dren sur, 222 ft to E and 152 ft to S line.

GRAYSON COUNTY—Shancle & DePree's Jno. Mitchell 1, R. R. McIntyre sur, 200 ft to N and 180 ft to E line.

GUADALUPE COUNTY—W. L. McClanahan's Wiseman & Knott 1, E. Smith sur, 150 ft to N and E lines.

HARRIS COUNTY — Cezeaux & Martin's J. Hirschi 13, J. B. Jones sur, 300 ft to S and W lines.

HIDALGO COUNTY—Doyle L. Smith Oil Co.'s Fernandez 3, Porcian sur, 400 ft SE No. 1.

JEFFERSON COUNTY—Sheffield, Telshow et al's Rowe 1, Jno. A. Veatch sur, 20 ft to N and 150 ft to E line.

HARDIN COUNTY—Gulf Prod. Co.'s Wing 155, Jno. Knight sur, 200 ft S No. 154.

LIBERTY COUNTY—Republic Prod. Co.'s Dolbear 77, J. DeVore sur, 1435 ft E and 1000 ft to S line.

MITCHELL COUNTY—J. J. Carey's E. Morrison 1 sec 32 330 ft to S and E lines.

McMULLEN COUNTY — San Balt Pet Co.'s Jno. Stitz 4, Jas. Garner sur, 375 ft W No. 1.

McCOULLOCK COUNTY—A. H. Bell's D. S. Pumphery 1, H&TC Ry sur, sec 275, 225 ft to N and 250 ft to W line.

MATAGORDA COUNTY—A. G. Wolf's J. H. Otis 3, I&GN Ry sur No. 3, NW cor.

MILAM COUNTY—Rountree & Simpson's Fee 4, Chambers sur 750 ft to W and 150 ft to S line.

MEDINA COUNTY—Amy Oil & Gas Co.'s J. J. Wipff 1, abset 37 SE cor.

NAVARRO COUNTY—Humble Oil & Ref. Co.'s Hill Bros. 1, Mrs. J. Smith sur, 300 ft N No. 2; W. C. Humphreys 24 Mrs. J Smith sur, 600 ft to N and 150 ft to W line.

ORANGE COUNTY—Gulf Prod. Co.'s F. T. Peveto's 4, Wm. Dyson sur, 300 ft E No. 3; Lee Hager Fee 12, S. M. Luce sur 300 ft S No. 10.

PANOLA COUNTY—Magnolia Pet. Co.'s C. G. Steele 7, B. C. Jordan sur, 400 ft NE No. 2.

SHACKELFORD COUNTY — Belcher & Palmer's L. M. Watson 3, sec 36, Univ Lands sur, 1050 ft to N and 1100 ft to W line. C. L. Stevens' J. T. Cockrell 3, sec 15, Insane Asy sur, 300 ft to S and 150 ft to E line. J. L. Douglas' T. T. Brooks 1, Univ Lands sur. Ell Evens' S. Brooks 2, sec 105 Univ Lands sur, 300 ft N No. 1; J. W. Bankston 2, sec 105, Univ Land sur, 400 ft to N and 150 ft to E line; 3, 250 ft N No. 2. Smith & Evans' W. M. Broyles 6, Insane Asy sur, sec 16, 400 ft to N and 150 ft to W line. Chas Steele's W. H. Pitchard 3, blk 21, Univ Lands sur, 320 ft NW No. 1.

STEPHENS COUNTY—Snowden & McSweeney's J. G. Higginbotham 14, sec 1, Insane Asy sur, 990 ft to S and E lines. Walker-Caldwell Prod. Co.'s C. J. Jones 6, sec 34, Insane sur, east central. Sinclair Oil & Gas Co.'s T. O. Henderson 8, TE&L Ry sur No. 2084, 1650 ft to N and 1100 ft to W line. Pender Prod. Co.'s Davis Hrs. 2, sec 2084 TE&L Ry sur, 300 ft to N and W lines; A-1, sec 2083, TE&L Ry sur, 300 ft to S and 400 ft to E line.

THROCKMORTON COUNTY — Hale-Tex Co.'s O. J. Woods 1, TE&L Ry sur No. 3226, 150 ft to S and W lines.

WICHITA COUNTY—Roy I. Carter's Kemp & Kempner 4, blk 53, J. M. Tiger sur, 350 ft W No. 2. J. H. Turner's Mrs. W. Parker 1, P. P. C. S. L., blk 21, 150 ft to S and E lines. Jno. G. Lone Drilling Co.'s Kemp & Kell 1, blk 6, SP Ry sur, 150 ft to N and W. lines. Texhoma Oil & Ref. Co.'s S. B. Burnett 3-A, sec 5, SA&MG Ry sur, 300 ft N No. 2; W. B. Hamilton 3, D. C. S. L., blk 22 300 ft No. 1. Simms Oil Co.'s B. F. Dutton 1, D. C. S. L., 150 ft to W and 856 ft to S line. Magnolia Pet. Co.'s Hartain & Walker 22, 250 ft to E and 200 ft to S line. J. J. Douglas' G. Jennings 1, HT&B Ry sur, sec 8, 660 ft to E and 150 ft to S line. F. C. Baldwin et al's J. W. Kennedy 17, GC&SF Ry sur, blk 6, 300 ft NE No. 15. Gulf Prod. Co.'s W. T. Waggoner 1, HT&B Ry sur, sec 13, 150 ft to S and E lines. Eureka Prod. Co.'s W. T. Waggoner 8, H&TC Ry sur, sec 148, 500 ft N No. 6. Cowden Drilling Co.'s Waggoner Brs. 1, BS&F Ry sur, sec 11, 150 ft to S & E lines. Bradley Oil Co.'s J. Hirschi 20, D. Cowan sur, 428 ft S No. 3. Gilliland, Scott & Coggin's W. H. Chilson 2, D. C. S. L. blk 21, 400 ft W No. 1. American Ref. Co.'s J. & J. Waggoner 1, M. A. Willis sur, 150 ft to N and W lines. Browning & McClure A. C. Henson 1, W. R. Eaves sur, 750 ft to E and 160 ft to S line. Pigg & Murchison's E. Foster 2, S. Denison sur, blk 833, 150 ft to S and W lines. F. C. Baldwin's Texas Co. 1, sec 9, GC&SF Ry sur, 200 ft to N and 150 ft to E line.

Young County—Nash & Windfohr Oil Co.'s A. Bowers 1, O. T. Brown sur, 180 ft to N and E lines. Mutual Oil Co.'s T. J. Glidwell 3, O. T. Brown sur, 600 ft S No. 2.

LOUISIANA

Acadia Parish—Rycade Oil Corp.'s Houssiere-Latrielle 2, 47-9S-2W, 1300 ft S of N line and 150 E of W line of Block 8.

Bossier Parish—W. E. Olmstead's Strange A-14, 23-19N-11W, 150 ft N and 650 ft E of SW cor of SW¼. Standard Oil Co. of Louisiana's G. W. Smith 2, 15-19N-11W, 510 ft N and 150 ft W of SE cor of sec. Geo. W. Wetherbee's Wetherbee 11, 15-19N-11W, 820 ft E and 349 ft S of NW cor NW¼ of NE¼.

Cameron Parish—Johnsons Bayou Prospecting Co.'s McManus-Payell 1, 7-15S-14W, 660 ft S and 400 ft E of NW cor of SE¼.

Union Parish—Union Power Co.'s Union Saw Mill A-9, 31-21N-4E, center of SE¼ of SE¼; Union Saw Mill A-10, 5-20N-4E, center of SE¼ of NW¼; Union Saw Mill A-11, 4-20N-4E, center of SE¼ of SW¼; Union Saw MillA-12, 1-20N-3E, 250 ft W and 15 ft N of SE cor SE¼ of NE¼; Union Saw Mill A-13, 7-20N-4E, 250 ft N and 250 ft E of SW cor SE¼ of NE¼; Union Saw Mill A-14, 12-20N-3E, 250 ft N and 250 ft E of SW cor NE¼ of NW¼; Union Saw Mill A-15, 2-20N-3E, 250 ft N and 250 ft E of SW cor SE¼ of NE¼.

ARKANSAS

Ouachita County—Atlantic Oil Prod. Co.'s Rowland 2, 29-15-16, 300 ft N and E of SW cor NW¼ NW¼. Amerada Pet. Corp.'s Lester Mills 1, 9-13-19, 330 ft S and E NWc SE¼ NW¼. Clark et al's Berry 2, 24-15-17, 200 ft S and W of NEc NE¼ SW¼. Gulf Ref. Co.'s Hampton-Meeks 2, 19-15-16, 200 ft N and E of SWc of sec; Solmson 3, 29-15-16, 1650 ft E and 990 ft N of SWc of sec. Johnson et al's McElroy 2, 29-15-16, 150 ft S and E of NWc SE¼ NW¼ NE¼. Myar et al's Fee 2, 30-15-16, NWc S½ NE¼ SE¼. The Texas Co.'s LaGrone 1, 30-15-16, 168 ft S and 200 ft W of center; Smith 1, 31-15-16, 235 ft S and 200 ft W of NEc of SW¼; Solmson A-4, 29-15-16, 330 ft S and 175 ft E of NWc SW¼; Solmson B-2, 32-15-16, 1045 ft W and 275 ft N of center. Walker et al's Mangus 1, 24-15-17, 150 ft N and E of SWc NE¼.

Union County—Crosby Trust's Harrell 3, 17-16-15, 150 ft N and 700 ft E of SWc SE¼ NW¼. DeLucke et al's Harrell 3, 17-16-15, 450 ft N and 150 ft W of SEc SE¼ NW¼. Detroit Summerfield Oil Co.'s Moody 9, 17-17-14, 200 ft S and W of NEc SW¼ NW¼. Federal Pet. Co.'s Murphy 4, 22-16-15, 200 ft N and W of SEc NE¼ NW¼. George & Jones' Young 3, 18-15-16, 200 ft S and E of NWc NE¼ NW¼. Gulf Ref. Co.'s James 5, 6-16-15, 1828 ft S and 1120 ft E of NWc of sec, old well, to deepen; Jameson 2, 21-16-15, 200 ft N and 1120 ft W of SEc NE¼ LeCroy 1, 16-16-15, 1120 ft S and 200 ft E of NWc. Higgins O. & F. Co.'s Jameson 4, 21-16-15, 200 ft N and E of SWc SW¼ NE¼. Hurst et al's Dumas 1, 9-17-16, 250 ft N and W of SEc NW¼ SW¼. Lion Ref. Co.'s Murphy 1, 8-16-15, 200 ft N and 660 ft E of SWc SW¼ SE¼. Magnolia Pet. Co.'s Neeley 2, 1-16-17, 200 ft S and W of NEc NW¼ NW¼. McFarland & Fink's Lyall 3, 3-16-15, 200 ft N and W of SEc N½ SE¼ NW¼. Natural Gas & Pet. Co.'s Murphy 2, 8-16-15, 200 ft S and W of NEc SW¼ SW¼. Pure Oil Co.'s Craig 4, 15-16-15, 200 ft N and W of SEc SE¼ SW¼. Ray Drilling Co.'s Tatum 1, 7-16-15, 150 ft S and W of NEc W 25 acs of NE¼ NW¼, old well, to deepen. Tidal-Osage Oil Co.'s Lingelbach 3, 22-16-15, 200 ft N and E of SWc NW¼ NE¼.

A Catalog of a Hundred Field-Proved Tools

A Copy Awaits You

Explaining and illustrating the quality and service to be found in Bridgeport Tools.

For convenience it is divided into three sections:—

1. **Swan Underreamers.**
2. **Drilling and Fishing Tools.**
3. **Rental Tool Service.**

This valuable catalog will be sent upon request to anyone actively interested in the Oil Business.

Be sure in giving your name to include your full address.

THE BRIDGEPORT MACHINE COMPANY

General Offices and Works WICHITA, KANSAS

WILDCATS FROM ALL SECTIONS

Major Companies Active on Balcones Fault

Acreage largely owned by big interests— Much work planned for spring campaign

Corsicana, Texas, Jan. 21.—The history of the Corsicana-Powell field's prolific area being controlled by a comparatively few number of companies is apt to be repeated in the event more producing structures are uncovered by the extensive wildcat drilling campaign now proposed by the major companies and independent operators in the Balcones fault region extending in a northeastern direction from Powell through Hopkins County, a distance of approximately 80 miles.

Most of this wildcat area has been leased in blocks ranging from 500 to 10,000 acres.

The wildcat tests now getting underway, or proposed for active drilling by spring, are to be located near the center of these large blocks of protection acreage, taken on the strength of geological data, and the possibility arises for only a few companies to have nearby leases in the event an oil producing structure is uncovered. However, a number of the companies now have lease buyers working in this section of East Central Texas to acquire leases on small tracts adjacent to blocks of acreage about to be tested out and with favorable geological indications. Acreage of this kind is largely in the hands of lease brokers, who are getting from $25 to $100 per acre, although a derrick is not in sight for miles in some instances.

The upper part of the 80-mile strip of territory in the fault region being played by wildcatters gives promise of taking the lead in actual drilling operations, although it is more remote from production. Judge Julius A. Germany and others of Dallas are rigging up to test out a large block of acreage in the northeast corner of Kaufman County on the W. J. Kirby ranch, S. Edens survey. Farther to the northeast and in the northwest part of Hopkins County, Bernard H. Laskey, geologist of Tulsa, and others are reported to be preparing to move in materials for a test that will be drilled in the northeast corner of the R. B. Patterson farm, Henry Russell survey, and north of Ridgeway. The Gulf Production Company is reported to be one of the companies that contemplates drilling their lease blocks in southeastern Hunt County, while Charles Pettit of Dallas is reported to have assumed drilling obligations in obtaining a lease in the Jas. Cole survey, between Greenville and Commerce, Hunt County. W. L. Brookins and Roy Jenkins, both of Dallas, are expected to make an announcement next week regarding the drilling of a wildcat test on a block of leases purchased in the northwest corner of Van Zandt County and in the Eligio Alvarado survey.

The Marling Oil Company of Ponca City, Oklahoma, which is operating in Texas in the name of its subsidiary, the Alcorn Oil Company has leases on more than 35,000 acres in a narrow strip extending from Navarro to Hopkins County, and most of this is divided up into five distinct blocks. The royalty interest on a large portion of this acreage is also owned by Marland interests and officials. Although previously announced, the Marland Oil Company has assumed obligations to start drilling tests on two of the large blocks of acreage taken near Wills Point and Point within the next few months. The preliminary exploration work on Marland acreage in East Central Texas is about completed after making use of the diamond core drill extensively up and down the 80-mile strip, and using a squad of eight Germans armed with an instrument somewhat like the seismograph to determine subsurface conditions by setting off a charge of dynamite and recording the vibrations of the earth in wave lengths by the instrument. The approximate depth, thickness and nature of subsurface formations are then determined from the instrument by mathematical calculations, according to the Germans. It is reported that the two tests supposed to be drilled by Marland as part of the lease consideration may be sublet to other parties for an interest in the blocks.

The Humble Oil & Refining Company, which recently acquired an interest in a block of 7200 acres in leases situated on the Henderson-Kaufman County line from the U. S.-Texas Oil Corporation and Frankel Brothers of New York City, has not started any of the free tests contracted for as part of the lease consideration on this block, but is expected to be drilling within the next three months. Leases changing hands lately in the vicinity of this block have commanded the highest prices on record, owing to geological indications.

Carson County Well to Be Completed as a Gasser

Amarillo, Texas, Jan. 21.—Efforts made in trying to drill past the heavy gas production in the wildcat test of the Humphreys (Pure) Oil Company on the Sandford ranch, Carson County, during the past few months have been unsuccessful, and the test is to be completed as a gasser, with a potential production of 100 million cubic feet daily. This well is located in the center of the northeast quarter of section 11, block 3, A. B. & M. survey, and is producing from a broken porous lime formation at 2306 to 2530 feet. The first gas production was obtained early last August good for 10,000,000 cubic feet daily from 2306 to 2460 feet, and later in August deeper drilling increased the flow to 100 million. Tools were lost in the hole while trying to drill past this gas, which is credited with a rock pressure of 440 pounds, and all but 30,000,000 cubic feet of gas was mudded off last November to fish out the tools at 2520 feet.

The progress of the rotary test being drilled by W. W. Silk and others on the S. B. Burnett ranch, section 115, Carson County, has been materially retarded after reaching the hard lime formation around the 2000 foot level, and early this week was reported drilling in lime formation below 2240 feet. This test was spudded November 24, 1923, and is making use of the type of rotary equipment that proved successful in the Tonkawa field in Oklahoma.

Palo Pinto County Well Increases Flow After Shot

Fort Worth, Texas, Jan. 21.—Spraying about 50 barrels of oil along with a flow of 4,000,000 cubic feet of wet gas after shot, the wildcat test of the Zada Belle Oil Company on the G. N. Weldon lease in Palo Pinto County and several miles south of Pickwick, proves up an entirely new section in Central West Texas. This well was reported several weeks ago showing for a small producer, and materially increased its flow late last week after being shot with 200 quarts in sandy lime pay from 3885 to 3955 feet. It is located about six miles to the northwest of the Dalton pool, which furnished one big well and a score of dry holes in past two years. The Sinclair Pipe Line Company is reported to be making arrangements to run a two inch line about five miles to purchase the oil from the Weldon producer.

Oklahoma Wildcats

ALFALFA COUNTY—McGinnie & Ward's Watts 1, C NE SW SE 21-27-10w, sd 800 ft. Armstrong, Henley & Pifflers Turnbull 1, C NW SE NW 23-24-11w, sd 200 ft.

ATOKA COUNTY—McPhearson et al's Wild 1, SWc NW 7-2-9, dr 3400 ft. Hanson et al's Dabney 1, C SE NW 17-4-11, sd 100 ft. J. F. Torrence et al's Fee 1, SWc NE 1-2-9, sd 1350 ft. Wapanucka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, sd 1700 ft.

BECKHAM COUNTY—Bollion Oil Co.'s Green 1, S SW SW 34-10-24w, sd 1360 ft.

Ship-Nash et al's 1, SEc NW 35-9-25w fsh 2400 ft. J. A. Pringle's Burkholder 1, C NE NE 6-9-24w, sd 3110 ft. Magnolia Pet. Co.'s Ezzell 1, NEc 36-9-24w, dr 3906 ft. Turman Oil Co.'s SWc NE 4-8-22w, moving in diamond core machine.

BLAINE COUNTY—Okomo Oil Co.'s Edlemaier 1, SWc 21-15-10w, dr 625 ft. Thompson et al's Dickerman 1, C SE SE SE 26-15-12w, sd 3213 ft.

BRYAN COUNTY—Lyon et al's Coombs 1, SEc SW NW NE 11-8-9, rig. Berilieu et al's Ramsey 1, NWc NE NE 32-7-8, sd 2475 ft.

CLEVELAND COUNTY—Garr Oil Co.'s Holland 1, NEc SE 31-10-4, r 2570 ft.

CUSTER COUNTY—Hoover Oil Co.'s 1, NWc SE 34-13-14, sd 2510 ft.

COAL COUNTY—Basie Oil Co.'s Heck 1, SEc 18-2-9, rig. Bearman et al's Payte 1, SWc NW NE 32-2-9, sd 2780 ft. Guy Vaughn's Downard 1, NWc SW 16-2-10, dr 1675 ft; Nichols 1, SW 1-1-11, rig. McPhearson et al's Jamison 1, NWc NE NE SW 24-1-8, sd 300 ft.

GRANT COUNTY—Ossenbeck et al's Hoffman 1, SEc 23-29-3, dr 2300 ft. Embry et al's Edwards 1, C SE SE NW 20-26-4, skidding rig 50 ft north. Alcorn Oil Co.'s Hubbard 1, C S L NW 12-26-2, flowing 30 bbls not comp. Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, sd 1270 ft.

GREER COUNTY—Western Nat. Gas Co.'s De Armond 1, NWc SW 23-7-23, sd 2015 ft hfw. Neal et al's Johnson 1, SEc NE NW 3-7-22w, sd 100 ft.

HARMON COUNTY—Keyes Pet. Co.'s 1, NWc SW 21-2-28, chg to std tools.

HUGHES COUNTY — Flesher Pet. Co.'s Smith 1, NWc NE NW 8-9-12, dr 3440 ft. W. J. Thurber's Foster 1, SEc SW SE 5-7-8, hfw 1444 ft. Kingwood Pet. Co.'s Burnett 1, NWc NE SW 7-7-10, dr 5227 ft. Paraffin Oil Co.'s Love 1, NEc SE NE 13-7-12, sd 2961 ft. Middle States Oil Co.'s 1, NWc 1[illegible]6-11, dr 3530 ft.

JACKSON COUNTY—Douglas Oil Co.'s Jackson 1, NWc SW SE 20-3-20, sd 3440 ft. J. D. Wade's 1, C SW NW 36-2-23, sd 1900 ft.

JEFFERSON COUNTY—Magnolia Pet. Co.'s Peck 1, C NW SW NW 4-3-6w, dr 2800 ft. Humble O. & R. Co.'s Lewis 1, NEc NE SE 16-6-7w, dr 2495 ft. Gant et al's Skelton 1, C NE NE NW 22-3-6w, dr 1525 ft. Shawver et al's Anderson 1, SEc NE 31-4-8w, sd 1050 ft. J. C. Cook Oil Co.'s Gibson 1, C NW NW NW 36-5-8w, dr 1310 ft.

KAY COUNTY—Comar Oil Co.'s Garrett 1, C NE NW SE 31-27-2, sd 2839 ft. Ostot Dev. Co.'s Rohoe 2, C NW NW SE 3-27-1, dr 1885 ft. Blackwell O. & G. Co.'s Kumbler 1, C NE SE 9-27-1, dr 2817 ft; Humphreys 2, C NW NW SW 10-27-1, spraying oil and 30,000,000 cu ft gas. Alcorn Oil Co.'s Mills 1, C NW SE 24-26-1, dr 2085 ft. Amerada Pet. Co.'s Elledge 1, NEc SE 32-27-1, set 6-in 3106 ft. Guyles & Daniels Chism 1, SEc NW 32-29-2, sd 2060 for 6-in. Brown & Wood's Lowery 1, NEc SW 11-26-1, sd 1245 ft. Mid-States Pet. Co.'s Cardin 1, SWc SE 8-22-2, dr 3325 ft.

KIOWA COUNTY—Connor et al's 2, NEc NW NW 34-7-16, r 1350 ft. Kiowa Dev. Co.'s School 2, NWc NE 33-6-20, sd 960 ft.

LINCOLN COUNTY—Heintz et al's Horton 1, SWc NE 7-14-4, run 5 3/16-in cas 3290 ft. Sun Ray Co.'s Gallagher 1, C N L SE SE 18-13-5, run 8¼-in cas at 2310 ft.

LOGAN COUNTY—Buford-Brim Oil Co.'s Newman 1, NWc NE 32-19-3w, collapsed cas 2480 ft. Frank P. Kelly et al's McDaniels 1, NEc 28-16-1w, lcn. Okla. Drlg. Co.'s Johnson 1, SEc SW 36-15-2w, sd 1716 ft.

LOVE COUNTY—Wickenheiser et al's Beal 1, NEc SE NW 13-5-3, sd 2465 ft. Drillers Synd. Oil Co.'s Wilson 1, NWc NE 11-7-2, sd 2830 ft.

McCLAIN COUNTY—Day Oil Co.'s Ball 1, SEc NW NE NE 9-5-3, dr 1900 ft.

MARSHALL COUNTY—Humble O. & R. Co.'s Scott 1, SEc NE SW 22-6-4, sd 2986 ft. Van Vleck et al's Chaffin 1, C SE NW NW 27-5-4, sd 2535 ft. Magnolia Pet. Co.'s Everett 1, C NE NE SE 36-7-5, dr 2600 ft. Lane & Watson's Sacra 1, C NW SE NE 10-5-5, sd 150 ft.

McCURTIN COUNTY—Fred Ptak's Wilson 1, NWc SE 15-8-25, sd 2700 ft.

OKLAHOMA COUNTY—W. T. Ramsey's Hendricks 1, SEc 8-12-1, sd 3655 ft. Firestone Oil Co.'s School 1, NWc SE 36-11-3, sd 2470 ft. Big Three Oil Co.'s Wild 1, SWc NE 31-12-12, rig down 1390 ft.

PITTSBURGH COUNTY—Paraffin Oil Co.'s Pratt 1, NWc SE NE 13-7-12, set 10-in 1976 ft.

PONTOTOC COUNTY—Harper et al's Dener 1, NWc SE SE 19-5-7, dr 420 ft Smith et al's Norris 1, SWc SE 34-4-6, sd 2420 ft. American O. & R. Co.'s Stark 2, SEc NW 16-4-6, dr 1100 ft.

POTTAWATOMIE COUNTY—Ossie Oil Co.'s Howell 1, SWc NE 13-10-2, r lugs 2550 ft. Magnolia Pet. Co.'s Bredenburg 1, C SE SW NW 18-7-5, dr 2900 ft. Dave Detrick's McGahey 1, SEc 10-6-2, r 2855 ft. H. G. Guinnu et al's Floyd 1, SWc SE 13-11-3, sd 2200 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, rig. Maud Oil Products Co.'s S. H. Yinson 1, NEc NW 18-7-5, dr 2885 ft.

ROGER MILLS COUNTY—Kellogg's Oil Co.'s Dr. Seba 1, C E L NE NE 10-16-21w, dr 2890 ft, show oil and gas. Twin Hills Oil Co.'s McClure 1, NW 15-15-26w, sd 1520 ft for 8-in. Colorado Oil Co.'s 1, C NW NW NW 32-16-22w, r 518 ft. A. D. Morton's Elders 1, C SE 22-16-18w, sd 300 ft for 20-in cas.

SEMINOLE COUNTY—H. Taylor Johns 1, SEc NE 34-9-6, dr 2400 ft. Independent Oil Co.'s Ahasse 1, NEc SW 15-9-8, dr 3568 ft. W. E. Phillips et al's Davis 1, SEc NE NE 28-9-8, fsh 3078 ft. Ossenbeck et al's Davis 1, C SW NE 10-8-7, fsh 3335 ft. Wm. McDougall's Belle Dindy 1, C SW SW 20-6-7, sd 1645 ft. Maxwell et al's Charty 1, C NE NW 36-6-6, rig. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, co 1875 ft.

TILLMAN COUNTY—Luffborough et al's Finley 1, SWc NE SW NW 23-2-17w, co 2975 ft. Continental Oil Co.'s Riverbed 4, SWc NW 8-5-14w, cementing 6-in 1520 ft. Marshall Bros.'

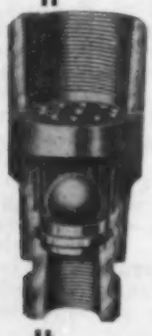
TONGS

that grip
but do not
crush

Wilson & Willard Mfg. Co.
MANUFACTURERS
"it's a Wilson"
Distributed By WILSON OIL TOOLS CORPORATION
Factory and Distributors Office
~ 2501 E. Vernon Ave. ~
Los Angeles, California U.S.A.
Tulsa, Okla.
Houston, Texas

ROARK STANDING VALVES
USE A LARGER BALL and SEAT
and GAS ANCHOR

By locating the valve ball and seat in the valve body on the outside of the working barrel, ROARK Valves permit the use of a larger ball and seat and gas anchor.



Descriptive Folder on Request

Order From Your Supply House

Texas Oil Pump Co
Waco, Texas

What Does It Cost To Drop a String of Tubing?

OIL operators who willingly pay the slightly higher price of genuine wrought iron have little opportunity to learn what it costs to drop a string of tubing.

READING IRON COMPANY
READING, PENNA.

OIL WELL SUPPLY CO., *Distributors*

EST. READING 1848

READING
GUARANTEED GENUINE
WROUGHT IRON PIPE

STANDARD

Seamless Casing

Equipped With Seamless Steel Couplings

6-⅝" and smaller

Prompt Delivery

Better than ordinary casing for shallow wells; an absolute necessity for deeper holes.

Standard-Seamless Tube Co.

Pittsburgh, Pa.

Riverbed 1, SWc NE NE 8-5-14w, cementing 6-in 1501 ft.

WASHITA COUNTY—R. B. Hartman's 1, NEc SW SE 23-9-17w, sd 1200 ft. Santrock Bros.' 1, SWc NE 20-8-16w, dr 2765 ft. McCoy et al's Pratters 1, C. SW SW NE 9-8-15w, sd 50 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's 1, NWc SW NW 33-30-14, sd 3000 ft.

BARTON COUNTY—Cheyenne Oil & Gas Co.'s Sooy 1, SWc SW 27-18-12, McMinn et al's Baker 1, SWc 5-18-13, sd 760 ft. Haynes et al's 1, SWc SW 31-18-12, dr 450 ft. H. W. Neiswanger's Everleigh 1, SW SE 1-18-12, lcn; Weiker 1, NWc SE NW 2-19-12, dr 550 ft. Mountain States O. & G. Co.'s 1, SEc NE 22-18-13, fsh 2400 ft. McMahan & Sampter 1, NWc 19-19-12, rig.

COFFEY COUNTY—Sunbeam Pet. Co.'s Andrews 1, NWc NE 32-20-15, rig. Thad O'Day's Allen 1, NWc SE 13-21-15, sd 900 ft.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-30, sd 2890 ft.

GEARY COUNTY—Liberty Texas Oil Co.'s Wright 1, NEc NE 9-12-6, sd 750 ft; Foster 1, NEc SW 30-16-6, sd 2000 ft.

JEFFERSON COUNTY—Northern Counties' Edwards 1, SEc NW NW 13-9-19, fsh 3400 ft.

KINGMAN COUNTY—Hale et al's Garner 1, SWc NW 34-27-1, sd 2543 ft.

OSBORN COUNTY—McKnight et al's Worley 1, NWc NW 34-10-15w, rig Delhi Oil Co.'s Forman 1, SWc SW 20-10-11w, sd 3250 ft.

OSAGE COUNTY—Sharpless & Starke's Kirklen 1, SEc NW 36-17-14, lcn. Rodgers & Bittler's Berthe 1, SEc NW 28-17-15, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Rogers & Brown 1, NEc NW SW NE 8-17-17, sd 2735 ft. Rogers & Brown's 1, NEc SW 15-16-16, sd 1500 ft. Foster Oil Co.'s 1, NEc SW 8-16-17, top lime, sd 1470 ft.

POTTAWATOMIE COUNTY—Crawford et al's Stewart 1, C E L SE SE SE 17-9-12, rig; Greischabert 1, SWc SE SW SW, 31-9-12, rig; St Mary's 1, SWc 11-10-12, sd 2290 ft.

RENO COUNTY—Haynes et al's O'Halloran 1, NWc SE NW 28-25-6, sd 2610 ft. Travis et al's 1, NE SW 5-26-4w, dr 1273 ft.

RILEY COUNTY—Ritchie et al's Boyle 1, SEc 36-7-4, sd 2601 ft. Walton Oil Co.'s Thierer 1, NWc 20-10-12, dr 1550 ft. Pawnee Oil Co. & Gas Co.'s Marks 1, SWc NE NW 26-10-6, sd 1700 ft.

REPUBLIC COUNTY—Mitchell O. & G. Co.'s Walker 1, SEc NE NE 23-2-1, dr 2025 ft.

SEWARD COUNTY—C. T. Development Co.'s Wood 1, NWc SE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Seeley 1, NEc NW 20-33-33, co 2427 ft, show oil and gas.

SUMNER COUNTY—S. H. E. Dev. Co.'s Stout 1, SEc NE 13-31-2, sd 3050 ft. Jack Robinson's Baker 1, NWc 2-31-1, lcn. Brady Bros.' 1, SWc 13-32-2, sd 3646 ft, shot 140 qts no results. Collins & Frantz's Young 1, SEc NE 33-33-2, rig. Collins, Claude & Nedson's Dillon 1, NEc 34-34-1, rig.

TREGO COUNTY—Morton et al's Kyser 1, C E½ 9-11-22, r 1406 ft. Keyes Pet. Co.'s Walsh 1, NWc SE 5-11-25, sd 1700 ft; Walsh 2, SWc NE SW 5-11-25, sd 1550 ft.

WASHINGTON COUNTY—Barnes O. & G. Co.'s Wickham 1, SEc SW 9-5-5, sd 1305 ft.

WOODSON COUNTY—Equity Oil Co.'s Soloman 1, SWc NE NW 30-26-17, sd 2960 ft.

Louisiana Wildcats

COMPLETIONS

Caddo Parish—
Humble O. & R. Co.'s Youree-Randolph 1, 24-20-15 ..... * 2946

De Soto Parish—
Caldwell et al Welch 1, 7-14-10.... * 1800

DRILLING REPORT

BIENVILLE PARISH—Arkansas Fuel Co.'s Harrell 1, 6-18-5, rig. Ohio Oil Co.'s Bodcau

A Guaranteed Product

Steelex balls and seats and **Bronzex** balls and seats are ground to fit—guaranteed tight.

Each ball and seat is ground together individually and they are kept in sets through the different operations in manufacture.

You can always depend on **Steelex** (In the red box) and **Bronzex** (in the yellow box). They are always absolutely uniform in quality and accurately machined.

You must appreciate how much this means toward reducing your operating costs.

If you forget the name Remember the Package

The Charles N. Hough Manufacturing Co.

"Where the Reliable Oil Well Supplies Come From"

Franklin, Penna.

PUMPING EQUIPMENT

Surplus–?

"A Surplus in business life or personal affairs means sound and healthful progress."

Have you a surplus in this Bank — or in any other?

It will be to your advantage to keep an amount on deposit to which you may add something as Fortune favors you.

It is the man with a SURPLUS who does not hesitate to ask the Bank for favors.

A Bank of Personal Service

Commercial National Bank

Shreveport, La.

1, 19-16-6, dr 2700 ft. Smith et al's Durrett 1, 34-18-5, dk.

BOSSIER PARISH—Atlantic Oil Prod. Co.'s Bolinger 1, 29-23-11, lcn. Burch & Davis' Hodges 1, 22-15-12, rig. Hoover et al's Freeman 1, 15-18-12, dk. Skannal et al's Fee 1, 22-17-12, plugged back to 2670 ft, making 2,000,000 cu ft gas, sd. Sneed et al's Jones 1, 23-18-11, sd 400 ft. Tarver Pet. Co.'s Bolinger 1, 15-22-14, sd 2657 ft. Zink & Kurbert's McGuffin 1, 4-18-11, sd 400 ft.

CADDO PARISH—Brewer & Sewell's Sharp 1, 15-18-16, dr 2465 ft. Caddo-Western Gas Co.'s Gardner-Blades 1, 2-16-15, sd 2050 ft. Crude Oil Co.'s Alexander-Ledbetter 1, 27-16-14, dr 2000 ft. Louisiana Pet. Co.'s Brewer 1, 33-23-16, dr 2815 ft. Matson et al's Nickerson 1, 30-19-15, dk.

CALDWELL PARISH—Culver et al's Culver 1, 21-14-4E, rig.

CLAIBORNE PARISH — Triangle Drilling Co.'s Ranich 1, 17-22-5, sd 2650 ft.

DE SOTO PARISH—Terrell et al's Porter 1, 22-12-13, dr 1585 ft; Porter 2, 15-12-13, dk tmbrs. Ulrey et al's Frost-Johnson 1, 3-11-15, set 8-in 1612 ft.

LA SALLE PARISH—Helm & Burch's Urania 1, 21-11-3e, rig. Urania Pet. Co.'s Urania 2, 20-10-2e, sd 2120 ft; Urania 3, dr 50 ft.

LINCOLN PARISH—Bickner et al's Colvin 1, 35-20-2w, dk. Four Creeks Oil Co.'s Colvin 1, 35-20-3w, sd 1510 ft. Middlefork Synd.'s Kay 1, 8-20-3w, to re-set cas 2365 ft.

RED RIVER PARISH—Coushatta Synd.'s Marsten 1, 24-12-10, sd 2250 ft.

UNION PARISH—Allen et al's Nale 1, 19-23-1e, lcn. Arkansas Nat. Gas. Co.'s Templeton 1, 19-23-1e, sd 120 ft. Berry & Roberts' Smith 1, 16-22-1e, lcn. Cargile et al's Heard 1, 25-21-3w, dk tmbrs. Davidson & Palmer's Green 1, 19-23-1e, dr 2490 ft. Evans et al's Cole 1, 16-22-2e, lcn. Gulf Ref. Co.'s Green 1, 19-23-1e, rig; Security Trust Co. 1, 23-23-1w, dk. Lide et al's Templeton 1, 18-23-1e, lcn. Neddo Pet. Investment Corp.'s Smith 1, 2-23-3w, dr 1200 ft. Noe et al's Gulley 1, 36-21-1e, setting 6-in 2070 ft. Ohio Oil Co.'s Adkins 1, 30-23-1e, lcn; Dubach Lbr. Co. 1, 15-20-1w, dr 850 ft. Roxana Pet. Co.'s Smith 1, 30-22-2w, dr 875 ft. Tarver et al's Rhodes 1, 30-21-1w, rig. Union Parish Drlg. Synd.'s Fee 3, 17-23-1e, sd 2287 ft.

WEBSTER PARISH—Cotton Valley Synd.'s Merritt 1 and 2, 14-21-10, lcns. Fortuna Oil Co.'s Pruitt 1, 17-21-9, dr 50 ft; Stratton 1, 31-22-10, dr 1005 ft. O'Brien et al's Dales 1, 26-21-9, dr 2135 ft. Oil Fields Gas Co.'s Hope A-1, 13-21-10, bailed cas dry and sd 2396 ft; Hope B-1, B-2 and B-3, 13-21-10, lcns. Palmer & Blount's Anders 4, 6-18-10, testing 1034 ft. Palmer Corp.'s Miller 1, 29-21-10, to resume dr 3378 ft. Snyder et al's Hodges 2, 15-21-10, dk. Standard Oil Co.'s Woodward & Walker 1, 16-17-8, dr 1130 ft. White Oil Corp.'s (Wadley) Gleason 1, 31-22-9, rig.

Arkansas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Clark County—		
Arkansas Synd.'s Barringer 1, 26-10-		
Ark. Synd.'s Barringer 1, 26-10-20..	*	3120
Nevada County—		
Steele & Sandlin's Martin 1, 13-14-22	*	2480
Transcontinental Oil Co.'s Blakeley 1, 14-13-20	*	2870
Union County—		
Federal Pet. Co.'s Union Saw Mill Co. 2, 28-17-12	*	3218

DRILLING REPORT

CALHOUN COUNTY—Harris & Bickley's Freeman-Smith 1, 26-16-13, sd 1152 ft. Vitex Oil Co.'s Adams 1, 29-12-12, dr 1940 ft.

CLARK COUNTY—American Drlg. Co.'s Wilson 1, 15-8-22, sd 440 ft.

CLEVELAND COUNTY—Clark & Melat's Wilson 1, 12-8-12, dk. Rex O. & G. Co.'s Ward 1, 18-11-11, sd 610 ft. Southern Arkan-

TEMPER BURNS SCREW

BURNS PATENTED TUBULAR TEMPER SCREW

The one that will stand the severe usage of oil field equipment.

For Sale by all Supply Companies

BURNS TOOL COMPANY

Okmulgee, Oklahoma

EVERYTHING
FOR THE OIL WELL

Operators in the oil fields in this territory have found that the many facilities we maintain assure them at all times

A DEPENDABLE SOURCE OF SUPPLY

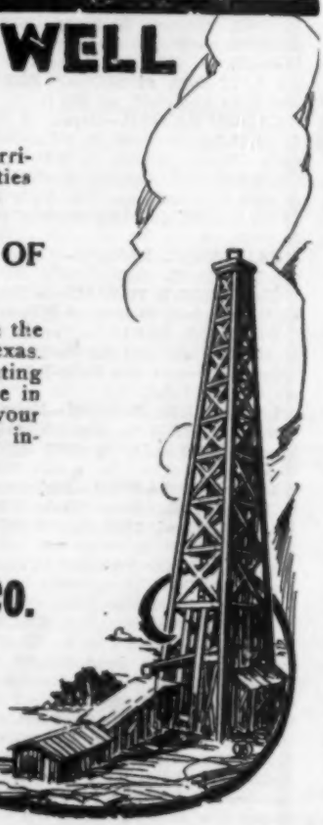
Peden supplies have had a large part in the development of the oil fields of Texas. With our years of experience in meeting the requirements of these fields we are in a position to serve best. Send us your orders or write today for prices and information.

"We Ship Quick"

The Largest Supply House in the Southwest

PEDEN IRON & STEEL CO.

HOUSTON SAN ANTONIO
FT. WORTH SHREVEPORT



What Does Moving Cost You?

Freight and hauling are big factors in drilling cost.

In putting drill outfits in foreign fields, ocean rates mount fast, and hauling heavy supplies to wilderness camps often causes serious delay.

Peons carrying parts of a diamond drill in Mexico

Sullivan Diamond Drills

are the most compact and the lightest oil drilling rigs you can select. They don't use large, heavy casing, even on deep holes. An outfit for 2500 to 3000 feet will weigh only 20 to 30 tons, in small units, as compared with 60 to 125 tons for other types of drills.

The diamond drills themselves may be sectionalized, if desired.

Sullivan Diamond Drills are not only the cheapest to put on the ground, but the cheapest to operate. The cores which they secure furnish precise, complete knowledge of oil deposits which is invaluable for geologist, producer and investor.

Ask for Bulletin 4280-0.

SULLIVAN MACHINERY COMPANY
122 So. Michigan Ave., Chicago

sas Oil Co.'s Moore 1, 27-9-10, dr 2150 ft; Oeschner 1, 14-9-9, dk.

COLUMBIA COUNTY—Brown et al's Robinson 1, 23-18-23, sd 2844 ft. De Soto & Hickman's Fullenwilder 1, 3-16-21, sd 1070 ft. Dowdy et al's Fullenwilder 1, 12-17-22, set 6-in 2070 ft. Hosey et al's Haire 1, 30-19-18, sd 2156 ft. Miller et al's Watts 1, 20-16-18, sd 1990 ft.

DALLAS COUNTY—Conway et al's Riggs-Matlock 1, 33-8-15, sd 1805 ft. Langley et al's Coleman 1, 6-10-14, dk tmbrs.

DREW COUNTY—Graves et al's Karnes 1, 10-13-6, set 8-in 1748 ft. Rhodes et al's Martin 1, 27-12-8, set 6-in 1514 ft.

GRANT COUNTY—Grant County O. & G. Co.'s Cargile 1, 26-5-12, dr 2150 ft. The Texas Co.'s Chicago L. & T. Co. 1, 14-5-13, dr 1000 ft.

HEMPSTEAD COUNTY—Hope Columbus Oil Co.'s King 2, 24-11-25, dr 2110 ft. Johnson et al's State 1, 12-13-27, sd 730 ft. Martin et al's Adams 1, 36-12-27, dr 2195 ft. Meyer et al's Nicholls 1, 17-11-25, sd 1765 ft. Orr et al's Yates 1, 19-12-23, sd 1610 ft.

LA FAYETTE COUNTY—Ken-Saw Pet. Co.'s Red River 1, 34-19-24, sd 2823 ft. Lewisville Synd.'s Osborne 1, 16-15-24, sd 2380 ft. Wilburn et al's Hughes 1, 21-19-23, dr 310 ft.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 15-13-29, sd 1890 ft. Johnson et al's Hawkins 1, 10-11-31, sd 960 ft. Red River Valley Oil Co.'s Taylor 1, 29-13-29, sd 2790 ft.

MILLER COUNTY—Cochran & Ray's Adams 1, 4-14-27, sd 2850 ft. Kress (formerly Kingsley) et al's Thompson 1, 33-14-28, to resume dr 500 ft.

NEVADA COUNTY—Arkrado Oil Co.'s McCain 1, 36-10-23, rig. Anderson & Edwards' Eaves 1, 11-12-23 sd 180 ft. Carter et al's Bailey 1, 31-13-21, sd 400 ft. Kan-Ark Pet. Co.'s White 1, 11-13-21, rig. Miller-Burnham-Hawley Synd.'s Perry 1, 12-15-22, sd 558 ft; to set 8-in and test show of oil. Prescott Oil Co.'s Henry 1, 10-12-20, dr 2480 ft. Wooten et al's Moore-Martin 1, 9-13-20, sd 1225 ft.

OUACHITA COUNTY—Amerada Pet. Co.'s Lester Mill Co. 1, 9-13-19, dk. Eck & Boger's Criner 1, 21-15-19, dk. Foster et al's Harvey 1, 32-11-19, dk. Hopkins et al's Allen-Curry 1, 33-14-19, sd 2055 ft. Leeper et al's Wesson 1, 23-15-19, wosr 2205 ft. Peltier et al's Eagle 1, 25-12-16, sd 2054 ft. Pure Oil Co.'s Moline 1, 21-11-17, sd 2415 ft. Riley et al's Henry 1, 10-11-16, sd 2072 ft. Smackover Creek Oil Co.'s Moon 1, 32-15-17, set 6-in and sd 1861 ft.

UNION COUNTY—Bondurant et al's Clark 1, 34-17-12, to set 4½-in 2655 ft; Turbeville 1, 9-18-12, sd 1610 ft. Garrett et al's Robinson 1, 33-18-14, sd 2462 ft. Harrell Trust's Steele 1, 11-19-12, sd for cas 2435 ft. Hurst et al's Dumas 1, 9-17-16, dk. Ray et al's Long 1, 28-16-14, set 6-in 1993 ft. Starke et al's Little 1, 21-19-12, sd 2220 ft. Woodley et al's Townsend 1, 6-18-14, sd 3190 ft; sw.

Texas Panhandle Wildcats

(Note—The drilling report below does not show wells that are shut down indefinitely.)

ARMSTRONG COUNTY—Magnolia Pet. Co.'s Adair Est 1, sd 3975 ft.

CARSON COUNTY—Culbertson Bros.' V. B. Armstrong 1, sd 175 ft. Gulf Prod. Co.'s S. B. Burnett 3, sd 3150 ft. Humphreys Oil Co.'s J. M. Sandford 1, sd 2535 ft. W. W. Silk et al's S. B. Burnett 3, dr 2310 ft. The Texas Co.'s Mary C. Burnett 1, rigging up; Mary C. Burnett 2, mtl; S. B. Burnett 3, dr 1875 ft. Tipton, Stone et al's McConnell 1, sd 3028 ft.

GRAY COUNTY—W. H. Holmes et al's J. S. Morse 1, sd 915 ft. The Texas Co.'s G. H. Saunders 1, set cas 2375 ft.

HEMPHILL COUNTY—Piney Oil Co.'s Hopkins 1, dr 3050 ft.

HUTCHINSON COUNTY—Coline Oil Co.'s

Our Casper Warehouse

Above is shown the Rocky Mountain District Office and Warehouse of the WILLIAMSPORT WIRE ROPE COMPANY, located at Casper, Wyoming.

H. H. Wrightsman, District Manager, is shown at right; F. H. Smith, field man, is in center, and H. M. Cone, of the office staff, is at left.

Assisting this office in its work of placing WILLIAMSPORT lines within easy reach of every Rocky Mountain field, is the Montana Lumber & Hardware Company, of Lewistown and Winnett, Montana.

It is the WILLIAMSPORT policy to make lines unsurpassed for every oil field duty and to distribute them through a capable organization which renders them promptly available wherever needed and backs them with personal service. You can't go wrong if you let our men advise you, for they **know their business.**

WILLIAMSPORT WIRE ROPE COMPANY

KENNEDY BUILDING, TULSA, OKLAHOMA

Houston Graham Mildred Shidler Blackwell Ardmore Holdenville Okemah
Smackover Arkansas City El Dorado Shreveport Casper

We Give Service in Every Important Field

WILLIAMSPORT

M. Sandford 1, sd 3220 ft. Humphreys Oil Co.'s Johnson Bros. 1, fsh 2600 ft. Montgomery Oil Co.'s Johnson Bros. 1, ur 1880 ft. Plains Oil Co.'s J. F. Weatherly 1, sd 3260 ft. Producers & Refiners Co.'s L. Bivens 1-B, dr 1680 ft. Watchorn Oil Co.'s Cable 1, rigging up. Wilson et al's Johnson Bros. 1, rigging up.

MOORE COUNTY—Producers & Refiners Co.'s Masterson 1, material on ground.

POTTER COUNTY—Producers & Refiners Co.'s L. Bivens 1-A, fsh 2950 ft; Bivens 2-A, sd 1260 ft; Masterson 2, sd 3000 ft.

ROBERTS COUNTY—Roy Schenck et al's O. Laughlin 1, sd 60 ft.

WHEELER COUNTY—Mid-Continent Oil Synd.'s Ember 1, lcn. Roy Schenck et al's J. F. Bradley 1, dk. Skelly Oil Co.'s Davis Bros.' 1, dr 3178 ft. H. C. Tyrell et al's F. E. Sheldon 1, dr 1600 ft. J. Whittington's Williams & Laycock 1, sd 1950 ft.

North Texas Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
Throckmorton County—		
Monroe Prod. Co.'s R. S. Ray 1....	¶8	845
J. H. Richardson et al's Raynolds Cattle Co. 1	15	945
Wilbarger County—		
Adams Brown & McAllister W. T. Waggoner 1	*	2150

DRILLING REPORT

(Note—This report does not include tests that have been shut down indefinitely.)

BAYLOR COUNTY—Batchelder & King's E. S. Wallace 1, lcn. B. Cranfield et al's W. B. Mills 1, lcn.. Sunshine State Oil & Ref. Co.'s Mrs. E. S. Wallace 1, dk. Wurtz et al's Porter Ranch 1, sd 1010 ft.

CLAY COUNTY—Crude Oil Producing Co.'s Kinder 1, ur 1100 ft. J. T. Cumley et al's J. D. Stine 1, dk. E. C. D'Yarmett's Carpenter 1, sd 2000 ft. Gulf Prod. Co.'s H. Boddy 1, fsh 2800 ft; C. M. Worsham 3, dr 1500 ft. Lone Star Gas Co.'s N. H. Martin 1, dr 1006 ft; Withers 2, dr 985 ft. Nebraska Oil & Gas Co.'s W. H. Myers 1, set cas 3310 ft. Nix-Moore Oil Co.'s F. M. Hull 1, sd 1500 ft. Seaboard Oil & Gas Co.'s L. Zihlman 1, dk.

COOKE COUNTY—Big Indian Oil Co.'s B. W. Davis 1, sd 2790 ft. Red River Drilling Co.'s Whaley Jones 1, sd 1300 ft.

DENTON COUNTY—Hill Crest Oil & Dev. Co.'s J. H. Rayzor 1, sd 1350 ft.

GRAYSON COUNTY—Zee Tex Oil & Dev. Co.'s G. W. Cannon 2, sd 2960 ft; Griffin 1, sd 2225 ft.

HARDEMAN COUNTY—Frizell Oil Co.'s M. S. Winbury 1, sd 3075 ft.

KING COUNTY—Banks Oil Co.'s J. R. Hailey 1, sd 1630 ft.

KNOX COUNTY—Brazos Bend Oil Co.'s J. E. Clark 1, dr 1890 ft. White Oil Corp.'s Ward Ranch 1, sd 2815 ft.

MONTAGUE COUNTY—Bowie Chief Oil Co.'s C. H. Boedeker 1, sd 2725 ft. Gulf Prod. Co.'s T. Benton 1, dr 3320 ft. Humphreys Oil Co.'s J. W. Maddox 3, sd 1950 ft. Mascho Oil Co.'s J. L. Howard 1, sd 2200 ft. Rycade Oil Co.'s R. D. Beasley 1, set cas 3100 ft. Spencer & D'Yarmett's Wilson 1, sd 1080 ft. Texon Oil Co.'s L. Crenshaw 1-A, sd 2300 ft; L. Crenshaw 1-B, sd 1225 ft. The Texas Co.'s C. W. Rucktashel 1, rigging up second hole.

THROCKMORTON COUNTY—Ashcraft et al's Polk County School Land 1, sd 1050 ft. Graves & Burton's Reynolds Cattle Co. 1, lcn.

WILBARGER COUNTY—Apple & Brandberry's G. B. Ancell 1, rigging up. J. S. Dennis' W. G. Beckett 1, dr 600 ft. Herrington & Robinson's McCaleb 1, sd 2170 ft. Noble Oil Co.'s W. T. Waggoner 1, sd 1125 ft. South Vernon Oil Co.'s W. H. Stephens 1, testing 1970 ft, estimated 100-bbl well.

Central West Texas Wildcats

COMPLETION

Company, Well Location—	Initial Production Barrels	Depth
Callahan County—		
Greene, Gill & Greene Brown 1.....	*	605

DRILLING REPORT

BROWN COUNTY—Carlton-Tippett et al's O. B. Fomby 1, sd 1315 ft. Joe Cullinan et al's G. W. Pickett 1, sd 1135 ft. Infield Pet. Co.'s T. M. Windham 4, seting cas 2375 ft; Windham 5, rig. Leonard et al's Prather 2, fsh tools 2370 ft. Maher Bros.' Bohara 1, sd 2155 ft. Omaha Southern Oil Co.'s G. B. Gaines 2, sd 1690 ft. Price et al's Blair 2, sd 2010 ft. Fennant Oil & Gas Co.'s W. B. Strickland 1, dr 3125 ft.

HOOD COUNTY—Corsicana Oil & Ref. Co.'s I. A. Rylee 1, dr 1145 ft.

CALLAHAN COUNTY—J. F. Atha's Short 1, dr 110 ft. Byron-Union Oil Co.'s Hennessey 1, dr 3995 ft. Dudley Oil & Gas Co.'s Hugh Moore 1, sd 1750 ft. Chas Dutton et al's Mrs. Luke Cathey 2, dr 1750 ft. Hickey et al's E. L. Findley 2, fsh tools 2345 ft; Mrs. L. Cathey 1, spdg. Junior Oil Co.'s Thorn 1, sd 2705 ft. Moore et al's Acker 4, dr 480 ft; H. P. Faulkner 2, rigged up. F. W. Stone & Slick's C. W. Barr 1, fsh 1600 ft. Shackelford et al's Chas. Allen 1, ur 1565 ft. Andy Urban's Clinton 1, rigging up.

PALO PINTO COUNTY—Bankhead & Wheeler's Bankhead 1, sd 275 ft. Dalton-Bell Oil Co.'s R. S. Dalton 1, estimated 40 bbls., co after shot 10 qts 1220-55 ft. Jack Dalton Oil Co.'s R. S. Dalton 2, sd 4025 ft; Dalton 5, sd after shot 4060 ft. E. Hess et al's Crocker 1, sd 1525 ft. Hughes, Craig & O'Neil's Jones 1, sd 3810 ft. Moore & Sneboldt's Pruitt 1, dr 2285 ft. S. W. Manning et al's Hitson 1, sd 3640 ft. Nelson Oil Co.'s Finch 2, sd for shot 4155 ft. Pender Prod. Co.'s L. C. Slemmons 1, fsh tools 4100 ft. Phillips & Graham's J. A. Caudill 1, sd 2710 ft. Simms Oil Co.'s Costello 1, showing oil, dr 3875 ft. Scott & Mc-

Petroleum and Its Products

High-Grade—Uniform Quality

Gasoline, Kerosene, Fuel Oil, Naphtha, Distillates

Sunshine State Oil & Refining Co.

(Incorporated)

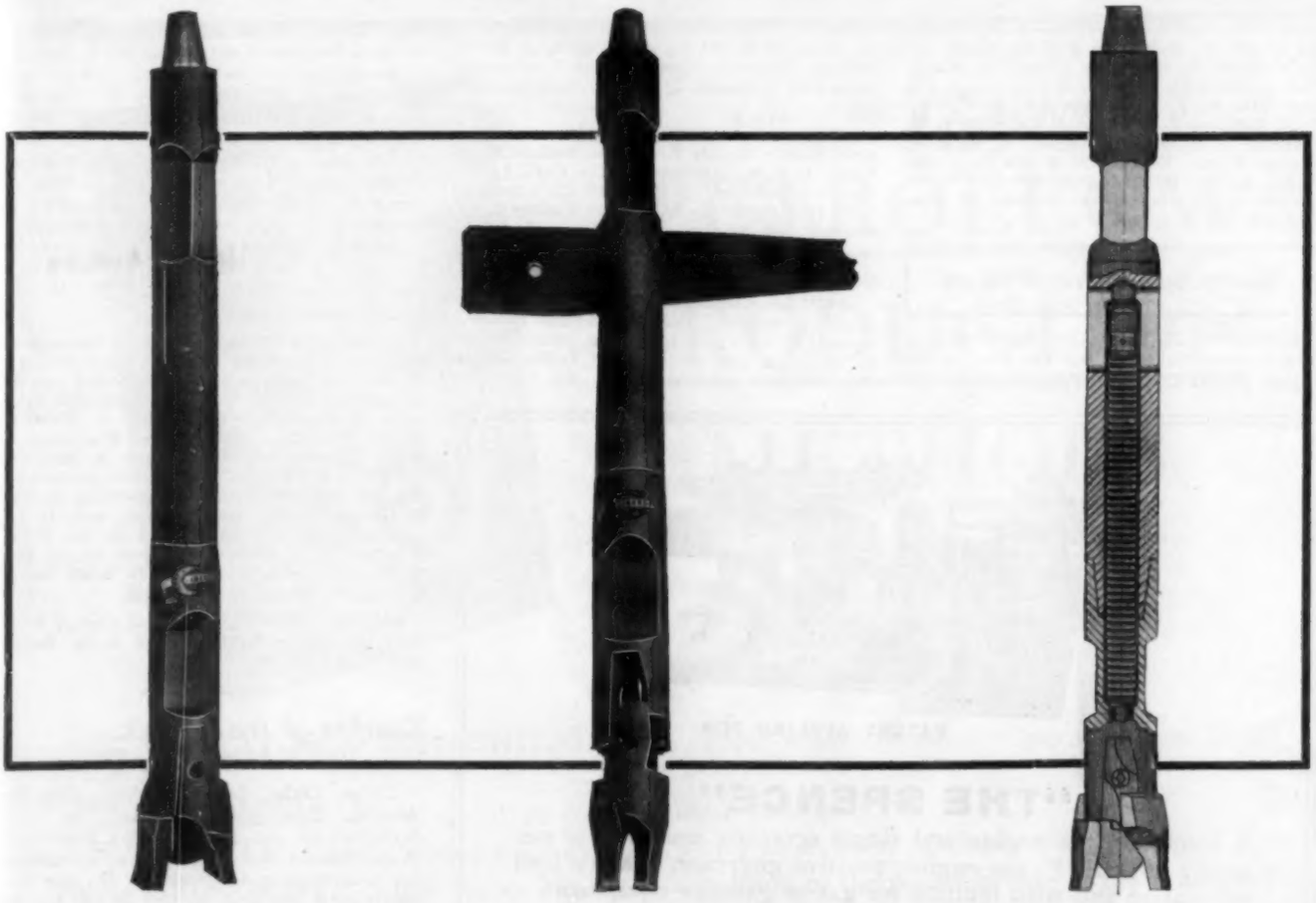
Offices, 1019-1025 American National Bank Bldg. **Wichita Falls, Texas**

Cosden & Company

HIGH GRADE

PETROLEUM PRODUCTS

TULSA, OKLAHOMA



RIGID AS A DRILLING BIT

The Strongest Underreamer Ever Made

GREAT STRENGTH is the primary need—and the thing that has been sadly lacking—in underreamers. We set out to develop an underreamer that would be as strong and rigid as a drilling bit. Field tests lastingan entire year consituted a part of our preliminary work. A careful examination of the new GUIBERSON UNDERREAMER will convince any experienced driller that it is by far the strongest ever made.

STRENGTH FEATURES: 60% of the cross-sectional area is down-thrust bearing surface for the cutters. Cutters contain more stock than others, and are so dovetailed into body that no play is permitted, nor is any strain placed on the bolt, during operation. Mandrel and bolt are of chrome vanadium steel. Spring is of exceptional strength and durability.

This great strength makes for speed and protects against loss of parts in the hole. Order through your supply house. Fully patented.

THE GUIBERSON CORPORATION

Box 1106, Dallas, Texas
California Branch: 1737 E. 7th St., Los Angeles

314 New Daniels Bldg., TULSA
825 Mason Bldg., HOUSTON
506 Trust Bldg., NEWARK, O.

GUIBERSON

BETTER BE SAFE THAN SORRY

Say you saw it in The Oil Weekly

Cluer's Riverbed 1, sd 3712 ft. H. L. Singleton et al's W. Holt 1, sd 3715 ft. Skelly Oil Co.'s Carter 1, rigged up. Texas & Pacific Coal & Oil Co.'s M. E. Robinson 1, dd, fsh tools 3583 ft; J. N. Stewart 144, co 1695 ft; J. H. Robinson 7, lcn. Upham Gas Co.'s J. H. Wharton 2, dr 3095 ft; Hartwell 1, machine; Watson 4, rig. Youkan Oil & Gas Co.'s Seaman 1, sd 3965 ft. Zada Belle Oil Co.'s G. N. Weldon 1, spraying about 50 bbls. oil after shot 200 qts at 3885-3950 ft.

San Antonio District Wildcats

ATASCOSA COUNTY—DeLange-Eiser Co.'s Tom 2, preparing to set 6-in cas.

JIM HOGG COUNTY—Miami-Balderas Oil Co.'s No. 1, dr. Revere Oil Co.'s Davenport 1, dr. Diamond S. Oil Co.'s Doering 1, dr below 3000 ft. Homer & Tyson's Tyson 1, recementment Assn.'s Nichols 3, dr; Jim Nichols 2, dr deeper.

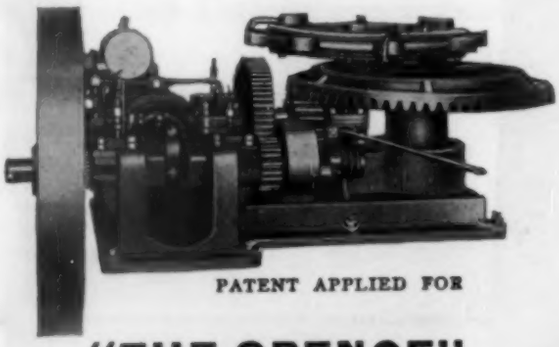
LIVE OAK COUNTY — Grubstake Investment Assn.'s Nichols 3, dr; Jim Nichols 2, dr below 1100 ft. Olcheweske Oil Co.'s J. M. Brown 1, spudded in. Lobo Oil Co.'s Reagan 6, dr 1006 ft. Harkey Oil Corp.'s Herring 1, dr below 750 ft. McCoy's Ross Murray 3, lcn.

MAVERICK COUNTY — Eagle Pass Oil Co.'s No. 2, dr. Southern States Indio 1, dr.

MEDINA COUNTY—Wheless' Jose de la Roche 1, dr. B. J. K. Co.'s Adams 1, down below 1100 ft. California-Medina Assn.'s Rothe 1, dr below 2300 ft. McBride Drilling Co.'s Adams 1, sur. 13 fsh 1460 ft. Ina Oil Co.'s Durst 2, sur. 15, dr below 1100 ft. William Oil Co.'s Jungman 1, sur 104, dr 300 ft. Middle States Oil Co.'s 1, sur 799, lcn. O'Bryan et al's Nixon 1, sur 14½, dr 400 ft. Charles Jackson et al's Adams 1, sur 12, lcn. Jake Wolff et al's Louis Moefield 1, sur 532, bailing. Young et al's Tom Brendle 1, dr. William Metzker's Ward 1, dk; waiting on machinery. Carl Bros.' Durst 1, sur 14, dr 1440 ft. Fuch's Jungman 1, sur 13, dr 800 ft. Herman Haught's 1, sur 459, setting cas 600 ft. Dr. Brown et al's Adams 1, sur 12, setting cas to test. L. N. Knight et al's Wipff 1, sur 16, dk. M. G. Haskell's Fritz Faselor 1, lcn.

McMULLEN COUNTY—Pioneer Production Co.'s Lowe 1, dr. San Balt Pet. Co.'s Stitz 3, dk. Hoad & Scarbauer's Fisher 1, setting tubing to pump at 784 ft. Pioneer Consolidated Pet. Co.'s Martin 1, dr 1681 ft. W. E. Elliott's Stitz 1, down below 868 ft. Foley & Delaham's H. T. Calliham 1, dk. Laughter & Napier's Stitz 1, dr 580 ft. Grubstake Investment Assn.'s Lark 2, dr below 770 ft; 3, cementing at 654 ft. George Smith's Fisher 1, dr in sand. D. S. Hoad's J. B. Fisher 1, block 8, dk. John Scharbauer's J. B. Fisher 1, block 15, dk. M. S. Holliday's Stitz 1, block 59, dr. South Texas Co.'s J. T. Brown 1, rigging up.

SAN PATRICIO COUNTY — Aransas Pass Live Oak Ridge Co.'s Sigmund 3, dr. Rockport Oil Co.'s 2, dr.



PATENT APPLIED FOR

"THE SPENCE"

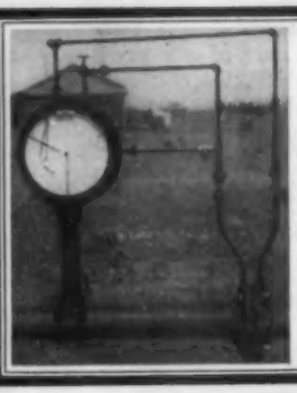
A combined gas engine and single eccentric pumping power with a 10½ H. P. gas engine, positive governor, gravity feed lubrication and wico ignition for gas or gasoline equipment.

This power has been pronounced by some of our largest producers as one of the best pumping units on the market for wells in territory of medium depth.

Manufactured and sold by

H. M. SPENCE

PARKERSBURG, W. Va.



Foxboro Orifice Meter

A rugged, accurate Orifice Meter for measuring Casinghead Gas, Natural Gas, Air, Oil, Steam, Gasoline and Water. Write for Bulletin N-113-1.

THE FOXBORO CO., Inc.

Foxboro, Mass., U. S. A.

213 S. Cincinnati Ave. Tulsa, Okla.

FOXBORO

REG. U. S. PAT. OFF.

THE COMPASS OF INDUSTRY

Tret-O-lite

(Reg. U. S. Pat. Office)

PROCESS PATENTED. The Barnickel processes for treatment of cut oil and other petroleum emulsions by the use of chemical agents are protected by valid process patents issued by the United States and foreign countries.

The purchaser of TRET-O-LITE is licensed to practice the Barnickel processes to the extent permitted by the quantity of TRET-O-LITE purchased. He is not licensed to use any other chemical covered by the Barnickel patents, either alone or with TRET-O-LITE.

WM. S. BARNICKEL & CO.

ST. LOUIS, MO.

Knights of the Derrick Select Their Directors

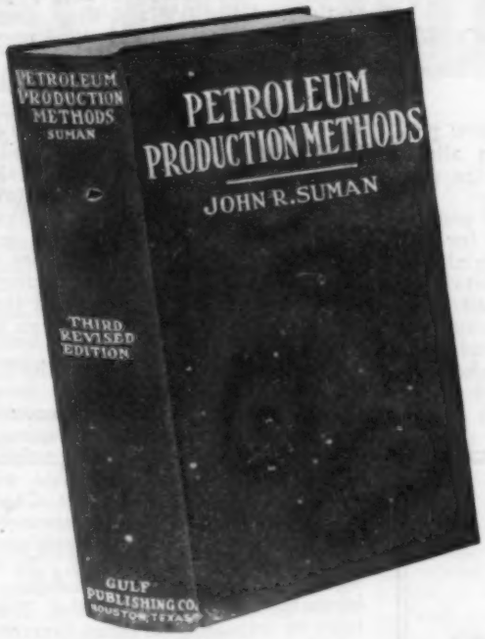
Tulsa, Okla., Jan. 15.—According to A. V. Bourque, secretary of the Knights of the Derrick, the fraternal organization for oil men, all ballots for nominating 41 directors for the organization are now in and in the hands of the nominating committee.

The nominating committee is composed of the following men: L. B. Jackson, independent producer, vice president of the First National Bank of Tulsa, president of the International Petroleum Exposition and Congress; P. M. Miskell, general manager of the Empire Companies; D. E. Buchanan, vice president of the Chestnut and Smith Corporation and president of the Association of Natural Gasoline Manufacturers; Jas. K. Crawford, president and general manager of the Brothers Oil Company; A. W. Leonard, vice president of the Oklahoma Natural Gas Company and president of the Hinderliter Tool Company; W. N. Davis, of Foster & Davis; Herb. Graffis of Petroleum Age, Chicago; S. R. Scivally, Sinclair Refining Company, Tulsa; H. W. Roe, traffic manager, Cosden companies; A. L. Hinton, National Petroleum News; Jas. McIntyre, Oil and Gas Journal, and R. L. Dudley, manager of Gulf Publishing Company.

Moore Made Chairman Of Shreveport Bank

Shreveport, La., Jan. 23. — R. T. Moore, formerly vice president of the Commercial National Bank of Shreveport, was elevated to the position of chairman of the board, to succeed E. A. Frost, resigned. The election took place at the annual meeting of the board and his selection was by a most hearty and unanimous vote.

At the meeting it was also announced that Tyson Cleary, formerly manager of the discount department, had been elected assistant cashier. With the exception of these two changes all officers were re-elected.



The Third Edition of

PETROLEUM PRODUCTION METHODS

By

JOHN R. SUMAN

MR. OPERATOR & SUPERINTENDENT: How about reducing Operating and Drilling costs?

MR. ENGINEER: How about increasing lease efficiency?

MR. DRILLER: How about the new kinks and new ways of doing things?

MR. GEOLOGIST: How about learning **something of the practical side of the business?**

During 1924 more attention will be given to the question of **INCREASING EFFICIENCY** and **LOWERING OPERATING COSTS** in the oilfields of the world than ever before.

Men who are **UP TO THE MINUTE** on the **LATEST METHODS** will **COMMAND GOOD SALARIES** because they will be able to prove to their employers that they are **DELIVERING THE GOODS.**

To keep absolutely up-to-date you must surround yourself with the latest literature.

PERTOLEUM PRODUCTION METHODS treats of the world's best methods of doing things in the oil business. The third edition, completely revised, is just off the press.

PETROLEUM PRODUCTION METHODS handles all phases of the oil business connected with the drilling for, recovering and handling of petroleum. All features are treated in a detailed and comprehensive manner. PETROLEUM PRODUCTION METHODS is one of the few books published which does not deal in glittering generalities.

Third Edition of PETROLEUM PRODUCTION METHODS just off the press. 680 pages, profusely illustrated, bound in beautiful flexible maroon binding, Postpaid $6.00

Send check to

The Gulf Publishing Co.

P. O. Box 1307, Houston, Texas

PETROLEUM PRODUCTION METHODS treats the following subjects thoroughly and intelligently:

DRILLING METHODS: Rotary drilling Methods—Latest appliances fully described. Latest details on coring and handling mud. Cable tool drilling methods. Diamond drilling. Derricks and Rigs. Costs of drilling. Heat treatment of drill bits.

METHODS OF SHUTTING OFF WATER: Detailed instructions for proper handling of cementing jobs, profusely illustrated.

OPERATING PROPERTIES AND HANDLING PRODUCTION: Controlling of Gushers and Gassers. Construction of Pumping Powers. Fighting Fires—How to do it.

TREATING OF EMULSIONS: Every lease has this problem to contend with sooner or later.

USE OF ELECTRIC POWER: Thorough discussion of this new power and its application in the oil fields.

PIPE LINES: Construction and Operation. Friction losses for various oils.

TANKS: Construction of tanks and tank farms. Strapping tanks. Preparation of gauging tables. Discussion of evaporation losses.

TABLES AND USEFUL INFORMATION: Latest A. P. I. gravity tables. Testing for impurities. Heat units per barrel. Pipe tables of all kinds. Dimensions of fittings. Testing capacity of gas wells.

Committee Considers Mellon Too Liberal On Oil Depletion; to Draft New Proposal

By Clarence L. Linz

Washington, D. C., Jan. 15. — A move to further restrict the depletion allowance to oil producers is being made by members of the House Ways and Means Committtte, who believe that even the recommendations of Secretary of the Treasury Mellon, giving them exemptions below existing law to be too generous.

The tax experts that are assisting the members of the Ways and Means Committee in the preparation of the proposed revenue-revision legislation to be based on the so-called Mellon plan, have been instructed to draft new provisions dealing with depletion allowances to be presented at a later date for further consideration.

In 1918, when there was a general activity incident to the war for the production of all kinds of materials for war use, the committee points out, there was much wildcatting and prospectors spent huge sums of money in useless activities. Later some of these people located oil and under the then existing law they were required to pay a very heavy tax as the profit all accrued in one year. Their "find" in fact, brought them into the excess profits sections of the law and they were not permitted to take account of previous losses.

Before 1918 allowances for depletion were based on original costs and if, for instance, a producer paid $10,000 for a piece of ground, later striking oil that advanced the value to $1,000,000, the allowance was on the basis of the lower figure. This was later changed to the discovery value and then it was found that depletion allowances were exceeding, or at least equalizing, the income from the property, and the operators were subjected to no tax whatsoever.

Congress was informed by the Treasury Department that there were oil companies who were paying no tax, yet who were receiving a large income, and that such profits were so manipulated as to become non-assessable as income. The next move by Congress was to limit depletion allowances to not to exceed the actual profit arising from the property they covered. In other words, if the producing company had income from other properties, it would have to pay income taxes thereon and not be permitted to include such income with the income actually arising from the producing property on which depletion allowances were asked.

In the Mellon plan bill it is provided that depletion allowances shall not exceed fifty per cent of the income from the property upon which it was allowed. Some members of the Ways and Means Committee expressed the opinion that such a rate was too liberal and the experts assisting them were instructed to draw up a proposal which would permit the taxpayer to either take his deduction as expenses for prospecting or, when he finally strikes oil, subject to certain limitations as to time, later to be agreed upon by the committee, to add the cost of previously unsuccessful explorations as to his expenses. Under this plan it is possible that the taxpayer may be permitted, in making a return for a given year, to go back over a period of, say, three or five years and take a credit for expenses incurred in unsuccessful ventures.

It is expected that a flood of protests from every section of the country producing oil, or which has prospects of oil development, will come to members of Congress against the proposed changes. Information concerning the proposal was sent on January 5 to Secretary H. H. Smith, of Tulsa, secretary of the Mid-Continent Oil and Gas Association, by Representative E. B. Howard, of the Tulsa district.

"Draft of the Mellon bill limits the right to deplete on account of discovery to fifty per cent of the net income, instead of permitting actual depletions as provided by law," said Mr. Howard's telegram. "I am also informed that several members of committee anticipate an effort to entirely eliminate the right to deplete on account of discovery." The depletion section was another provision of the law offered in prior congresses as an encouragement to the oil pioneer, who is now being allowed to register his property bringing in new oil as having depleted to the full value of the oil taken out. The provision did not operate in the case of oil beyond the discovery period.

Ask for Sucker Rod Bulletin

IF YOU are interested in Sucker Rod Hooks, either as a Purchasing Agent or a Field Man, you'll be grateful to us if we induce you to find out more about the Stewart Safety Hook.

It is very simple, and it does everything that a Hook could do. It swivels on special bearings. It prevents the load from jumping out. It doesn't catch in rigging—ever. It can't injure the hand of the operator. It is far too heavy and strong to be over-taxed.

Even the manufacturers can't say ALL of those things about any other hook.

The Stewart Safety Sucker Rod Hook is a PELCO Product, made in our own shops and absolutely guaranteed to be satisfactory to you. Otherwise—your money back.

If your supply company doesn't have the Stewart Hook they've probably got something "just as good." But don't buy it. Write the Walter O'Bannon Co., 817 E. First Street, Tulsa, Oklahoma, sole distributors of the Stewart Hook, and ask them who does handle it in your territory. They'll send you a folder, too.

GOOD PEOPLE TO DO BUSINESS WITH

The Hook LIFTS up readily, but no amount of pressure on the safety latch can PUSH it up. Simple, effective, safe

Pelican Well Tool & Supply Co.

General Offices: Shreveport, La.

M. Ind. Rgtrds. PELCO *Reg. U. S. Pat. Office*

OIL FIELD EQUIPMENT

PIPE, MACHINERY & OIL WELL SUPPLIES
Complete line of new and used pipe, complete Rotary Drilling Rigs, at attractive prices. Mill shipments promptly filled. See us before you buy.
TEXAS PIPE & SUPPLY CO.
1706-20 Maury Street Houston, Texas
Phones, Preston 1592-5411

C. H. Smith, Pres. and Treas.
Mrs. J. B. Moore, Vice-Pres.
A. L. Eastham, Sec.
Beaumont Well Works Co.
Oil, Gas and Water Well Supplies
Cor. Laurel and Magnolia
Beaumont Texas

HOUSTON OIL FIELD MATERIAL CO.
PIPE, BOILERS, ENGINES
All Kinds of Equipment, New and Used
West Bldg. Houston, Texas

"TEXAS SPECIAL" PORTABLE ROTARY RIGS
Gasoline engine, Power pump and complete Draw Works ALL ON WHEELS. Drills 2500 ft. for $1.50 per ft. Write for details and letters from satisfied owners.
OIL WELL SERVICE COMPANY
1414 Elysian St. Houston, Texas

BAKER CASING SHOE CO.
Box 264 "C" Huntington Park Sta. LOS ANGELES, CALIF., and Box 239 -C COALINGA, CALIF.
MANUFACTURERS AND DEALERS
Oil Well Specialties for Advanced Methods Practical and Dependable
BAKER
Anchor Wall Packers
Baker Casing Shoes
Bridge Builders
Cement Retainers
Cement Plugs
Clean-Out Bailers
Dump Bailers
Die Nipples | Water
Die Collars | Tight
Gas Traps
Hinged Spiders
Heaving Plugs
Pitman Ends
Plain Casing Shoes
Regular Hook Wall Packers
Release Hook Wall Packers
Rotary Bits Baker Type
Rotary Hole Guides
Rotary Shoes
Rotary Tool Joints
Rotary Wall Hooks
Split Shoe Guides
All Supply Houses or Direct

Oil and Gas Prospects In East Central Alberta

By G. S. Hume
(Geological Survey of Canada)

Recently, British Petroleums, Ltd., brought in an oil well near Wainwright from a sand 2019 to 2036 feet deep. Several wells have been drilled in this general vicinity, with the result that gas has been found in considerable quantities at several places and the outlook is favorable for further exploration.

As far as is known, the regional structure is a terrace, that is, a flattening of the general southwest dip over a considerable area. This produces a condition favorable to accumulations of oil and gas. It is also probable that minor structures, such as small domes or folds super-imposed on the terrace structure, account for the localization of the oil and gas into commercial pools. The edges of the terrace structure are not well defined, in fact not enough data is at hand from field work to do more than roughly outline the terrace; but from present information it is thought the western edge of the terrace extends northwestward from the vicinity of Hardisty to near Viking, where it turns more to the north. From Hardisty it probably extends southeasterly. Wainwright would thus be on the terrace at some distance from the western edge.

The Imperial Oil Company drilled a well at Fabyan, six miles northwest of Wainwright, and in this well at a depth of 2727 feet a daily flow of 14,000,000 cubic feet of gas was obtained. (The well finished at this depth, the gas horison being around 1900 feet.) A small amount of oil was present, which the escaping gas sprayed over the derrick, giving rise to reports at the time that oil had been struck. Deeper drilling encountered water.

At Irma, the Gratton Creek Oil Company drilled a hole on section 7, tp. 45, range 8 west 4th meridian. At a depth of 1620 feet, 500,000 cubic feet of gas was struck under pressure of 500 pounds.

The gas field at Viking is well known, there being a number of wells with varying but large supplies of gas. It is thought there are two gas horizons, one at about 2150 feet and the other approximately 2350 feet. The upper horizon gives the larger flow of gas. The structure in this field is supposed to be a minor dome-like fold on the terrace, which would expalin the concentration.

At Vegreville, a well drilled to a depth of 2,000 feet found gas at 1360 feet, amounting, according to reports, to 225,000 cubic feet. A little gas also came from a depth of 1,870 feet.

In a well drilled at Birch Lake on section 14, township 50, range 12 west of the fourth meridian, gas was found in a sand at a depth of 402 feet, the amount being 200,000 cubic feet. At a

FOR SALE
Six complete sets of light draw works. Half price.
The Wilson-Broach Co.
Box 1058 Beaumont, Texas

"First Exclusive Iron Dealers in Texas"
F. W. HEITMANN COMPANY
113 Main St., Houston, Texas
Gardner Steam Pumps
National Pipe, Boiler Tubes
Fittings, Valves, Packings
Beltings, Wire Rope
Drilling Cables, Bull Ropes
We carry a complete stock of the above commodities at all times and can ship immediately

Prevents Sanding

Sand can not accumulate in the gas anchor nor choke the gas anchor pipe, causing pulling to clean — when you use a
Reed-Yost Anchor Dump Valve
Action of the tubing automatically causes sand to drop through valve leaving standing valve free to function.
Another Specialty Made By
D & B Pump and Supply Co.
301 W. Ave. 26, Los Angeles, Calif.
Branch: Repair Depot, Love Aviation Field, Dallas, Texas, P. O. Box 1033

RECOGNIZED PETROLEUM GEOLOGISTS

DAVID DONOGHUE
Geologist and Engineer
Appraisals and Geological Reports
West Building, Houston, Texas

William H. Foster W. A. Reiter
FOSTER & REITER
CONSULTING GEOLOGISTS
19th Floor, Magnolia Bldg., Dallas
Atlas Life Bldg., Tulsa

Income Tax Service Oil Appraisals
The Jas. I. Tucker Co.
Consulting and Appraisal Engineers
Tradesmen's Bank Building
Oklahoma City, Okla.

GEO. C. MATSON
Petroleum Geologist and Engineer
Geological Surveys
Appraisals for Taxation or Financing
Phones Osage 2049-1833
408 Cosden Bldg. Tulsa, Okla.

EUGENE COSTE & CO.
Petroleum Engineers and Geologists
DALLAS, TEXAS
Dallas County State Bank Building

SAMUEL J. CAUDILL
Geologist & Petroleum Engineer
Valuation—Depletion
For Financial or
Income Tax Purposes
1016 Atlas Life Bldg. Tulsa, Okla.

ERICH F. KUEHNLE
Petroleum Technologist Rodgers Building
Geological Surveys, Supervision of Field Operations, Chemical Petroleum Analyses, Engineering and Statistical Services
Houston, Texas, U. S. A.
Phone Preston 5567. P. O. Box 331

ALEXANDER DEUSSEN
CONSULTING GEOLOGIST
Reports—Appraisals—Management
Texas and Louisiana Oil Properties
1105-6 State Nat'l Bank Bldg., Houston Tex.

DEWITT T. RING
Petroleum Geologist
El Dorado, Ark.
905 Electric Bldg. Buffalo, N. Y.

depth of 2018 feet, 500,000 cubic feet were obtained.

Thus it is well established there is a large gas field in the area to the northwest of Wainwright, and the oil well at Wainwright will likely lead to further exploration along the terrace structure. The oil at Wainwright is of a heavy quality, analysis showing it to contain but 2 1-4 per cent of gasoline. While further favorable structures for accumulation of oil probably exist in this area these will necessarily be of limited area, and only wells drilled on such structures can hope for success. In other words, the producing wells in this, as in other areas, are localized. Owing to the heavy mantle of drift which covers the rocks over large areas in this district, structures are not easily located, so that it seems probable much test drilling will be necessary before the producing areas can be determined. Under such circumstances many wells which fail to bring in oil will undoubtedly be drilled, a fact which the investing public will do well to bear in mind.

Geologists Hope to Get Survey Re-established

Oklahoma City, Okla., Jan. 21.—A move is being initiated by geologists and oil producers to re-establish the Oklahoma Geological Survey with a new personnel in order to serve the oil interests of the state. The previous legislature appropriated $110,000 to maintain the survey for two years and this appropriation was vetoed by Former Governor Walton. It is desired to have an appropriation made by the legislature which meets in January to support the survey until June 30, 1925, and Governor Trapp and several legislators have expressed themselves as favorable to the plan.

A number of reports and maps have accumulated in the files of the Oklahoma Geological Survey and have not been published. These include reports on the geology and possibilities of oil and gas in portions of Craig, Nowata, Rogers, Washington, Cimarron, Lincoln, Love, LeFlore, McCurtain, and other counties. There are also very detailed maps of the lead and zinc region in Ottawa County, and a manuscript on chemical analyses of Oklahoma rocks and minerals has also been completed ready for publication.

The cost of maintaining a survey for a year until the biennial session of the legislature and for publishing these maps and manuscripts to make them available to the public is estimated at about $30,000.

One of the projects for the new Oklahoma Geological Survey would be a co-operative undertaking with the federal survey to make a general subsurface study of the oil producing district of the northeast quarter of the state, in order to make subsurface structure maps of the top of the Bartlesville sand, the Mississippi lime and the Wilcox sand.

L. H. OWEN
Consulting Engineer and Geologist
WORTH BLDG.
Phone Lamar 7964
FORT WORTH, TEXAS

Oil Appraisals Management Tax Service
C. N. BLACK
Petroleum Engineer
Texas Oil Properties
406 Stewart Bldg. Houston, Texas

PATENTS
Patents Obtained and Trade Marks and Copyrights Registered
428-29-30 Bankers Mortgage Building
HARDWAY & CATHEY
Phone Preston 4790 Houston, Texas

Maurice Hirsch & Allen Hannay
ATTORNEYS AT LAW
601-2-3 Goggan Bldg
HOUSTON, TEXAS
Specializing in Oil Law and Land Law

PATENTS
Patents Obtained, Trade Marks, Patent Causes
JESSE R. STONE
Formerly Assistant Examiner United States Patent Office
Andrews, Streetman, Logue and Mobley
12th Floor Union N. Bk., Houston, Texas

Frank A. Herald John M. Herald
HERALD BROTHERS
Geologists
Petroleum Engineers
303 Cosden Building Tulsa, Okla.

F. N. WILLIAMS
PETROLEUM ENGINEER
Specializing in Design, Construction, Operation and Management of Refineries, Investigation and valuation. Reconstruction of refineries to meet modern conditions.
2213 Park St., Beaumont, Texas

EDWIN B. HOPKINS
CONSULTING GEOLOGIST
25 Broadway
NEW YORK

VINSON, ELKINS & WOOD
ATTORNEYS
Gulf Building, Houston, Texas
Special Attention to Oil Leases and Litigation

ACREAGE AND PRODUCTION FOR SALE OR WANTED

Texas oil leases close to drilling wells in Guadalupe, Bexar, Medina and Webb Counties. Much development taking place. Write for map and particulars. L. W. Stieren, 815 Alamo Natl. Bank Bldg., San Antonio, Texas.

The FT. WORTH LABORATORIES

Field Gas Testing. Analysis of oil field brines, gas minerals and oil.
Sell Thermometers, Hydrometers and Laboratory Glassware
F. B. Porter, B. S., Ch. E., Pres.
R. H. Fash, B. S., Vice President.
328½ Monroe St., Ft. Worth, Texas

F. W. Freeborn Engineering Corporation
Engineers, Appraisers, Constructors, Managers
For
Oil and Industrial Properties
Valuations for Income Tax, Reorganization, Refinancing and Mergers
General Offices: Tulsa, Oklahoma
Branch Offices: New York, Dallas, Boston

SOUTHERN ENGINEERING SUPPLY CO., Inc.,
Blue Printing Photostats
Engineering and Drafting Supplies
We specialize in map printing
90½ Main St., Houston, Texas
Phone Preston 6780

Mexia-Corsicana Stocks 29,567,125 Barrels January 1; Have Surplus of Steel Storage

Corsicana, Texas, Jan. 20.—Stocks of crude oil in steel storage in the Mexia district and the Corsicana-Powell field section of East Central Texas amounted to 29,567,125 barrels on January 1, thereby establishing a new high record for the district, and helping to make it one of the important storage centers for light oils in this country. This oil is held by 16 concerns, with three companies holding more than half of it. The rate of increase of crude stocks was comparatively low during December, owing to the tremendous decline of flush production in the Corsicana-Powell field, and pipe line facilities leading out from this field being more than adequate to handle all oil produced.

The tank building programs that were still under way when the Corsicana-Powell field reached its peak in November have been carried out on nearly all tanks partially erected, and considerable surplus storage now exists at Mexia and the Corsicana-Powell fields. No regrets are being offered by the companies that they have this storage, and the majority are anticipating other fields in later months on structures known to exist to the northeast of the Corsicana-Powell field, while some of the major pipe line companies are concentrating crudes from Oklahoma and Central West Texas in this district.

The Sinclair Crude Oil Purchasing Company is expected to start drawing on its crude stocks at Mexia in a few weeks to fill its contract with the Atlantic Oil Producing Company. This contract is reported to call for delivery of 7,500,000 barrels of crude oil within the next three years, with an average placed at around 10,000 barrels daily, although this average will vary from month to month because of irregularity of tankers' schedules. Some Mid-Continent crude is also to be applied on this contract. The Sinclair Pipe Line Company is reported to have started moving some oil on this contract to the coast this past week, as two tankers are due to arrive at Sinclair's docks at Houston this week.

The Western Oil Fields Corporation, which is now owned by Mutual Oil Company, has about completed the delivery of 3,000.000 barrels of Mexia crude contracted for by the Humphreys Oil Company during the over production period of the Mexia field, at a flat price of $1.10 per barrel. This oil was applied by the Humphreys Oil Company on the 33,000,000 barrel contract at $1.50 per barrel with the Standard interests.

Senate Act on Oil Lands Awaits Committee Report

Washington, D. C., Jan. 21.—Initial steps to cancel leases to United States naval oil reserves, entered into by the government through Former Secretary of the Interior Fall and Secretary of the Navy Denby, with E. L. Doheny, for the Pan American Petroleum and Transport Company, and with H. F. Sinclair, for the Mammoth Oil Corporation, were blocked in the senate when Senator Caraway (Dem.), of Arkansas, endeavored to have resolutions to that effect adopted.

10-Year Oil and Gas Leases

With low rentals in tracts from 640 to 20,000 acres each along Sheffield Terrace on Marathon Fold, Reagan, Crockett and Terrell Counties, Texas, and in general vicinity of high gravity oil producer in Reagan County, Fifteen of the major and most active companies in the state have already acquired protection acreage on the Marathon Fold. I am selling these leases rapidly and at reasonable prices. Write or wire for maps and full details by return mail.

Reference: Texas National Bank, Fort Worth.

C. W. WEBSTER
No. 1 Worth Building Fort Worth, Texas

EARLY DEANE
Drilling Contractor
El Dorado, Arkansas
Box 811 Phone 442
Two rigs in Smackover District

TEXAS OIL MAPS
County and District
Catalog on Application
HEYDRICK MAPPING COMPANY,
Wichita Falls, Texas

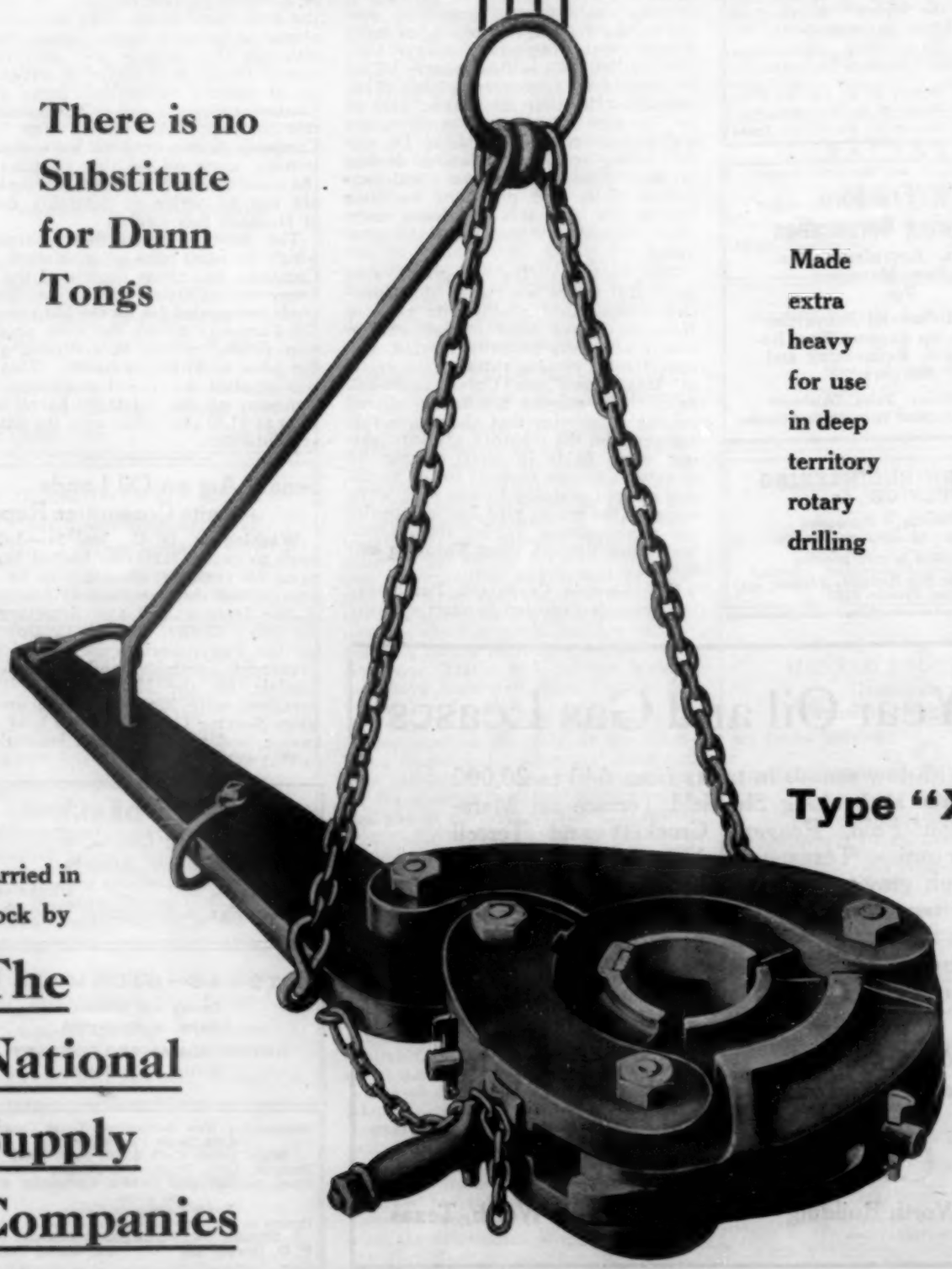
Announcing New Sectionized Texas County Maps, Scale 1 inch-1 mile
White Prints Cloth $5.00, paper $3.00
Humble, Gulf, Texas, Mid-Kansas, Prairie, Pure, Sinclair and Cosden Companies use our maps.
Every County in Texas
Orders in mail one hour after receipt of wire
TEXAS PETROLEUM BUREAU,
P. O. Drawer 586 Ft. Worth, Texas

Say you saw it in The Oil Weekly

The Type "XX" DUNN TONG

There is no Substitute for Dunn Tongs

Made extra heavy for use in deep territory rotary drilling



Type "XX"

Carried in stock by

The National Supply Companies

Say you saw it in The Oil Weekly

Manufacturer and Supply Dealer Notes

Wilson Tools Corporation Holds Sales Convention

Los Angeles, Calif., Jan. 23.—Anticipating the best year in its history and planning for greatly increased activity during 1924, the sales organization of the Wilson Oil Tools Corporation, the distributing company for Wilson & Willard products, held its annual sales convention during the first part of January in Los Angeles.

Announcement was made by General Manager W. W. Wilson that several important changes were being made in the organization. It was announced that Harry E. Hoffer, who was recently promoted from purchasing agent to sales manager, has received further promotion and is now occupying the chair of assistant manager. Mr. Hoffer's extensive experience in Eastern and California oil fields has given him excellent ground work for the position he now occupies.

The new sales manager for the Wilson Oil Tools Corporation is Arthur E. Raine, who has been identified with oil activities in California fields for many years. He brings to the Wilson organization an extensive fund of experience and an envious record as a sales executive.

The sales organization will direct its activities to practically every oil producing section of the world and plans are being perfected to give more comprehensive service than has been heretofore available.

NEW COMPANY FOR TEXAS

Dallas, Texas, Jan. 14.—Texas Unity Oil Company, a new concern organized by Frankel Brothers of New York City, has established offices in this city on the second floor of the Magnolia building. The officers of the company are Dean Fuller of New York, president; Leon F. Russ, manager; and W. L. Goldston, geologist. The Frankel interests also control the Big State Oil Company and the U. S. Texas Oil Corporation.

Supply Companies Active In Local and Foreign Trade

Tulsa, Okla., Jan. 22.—With advances in crude oil, manufacturers of oil field equipment in Tulsa are reporting an increasing domestic and foreign demand. The Cunningham Company, formerly the B. & C. Machine and Foundry Company, has just completed a shipment of 52 Standlee swivel swabs to Wyoming.

The Shaffer Specialty Company recently completed another foreign shipment of the Shaffer all-metal sand reel supports to the Lobitos Oil Fields Ltd. Within the last few years this company has built up quite an extensive foreign trade in addition to its domestic demand.

Gaso Pump and Burner Manufacturing Company and Maloney Tank Manufacturing Company have also recently completed shipments of equipment to foreign oil companies.

International Supply Has Branch Office in Casper

Casper, Wyo., Jan. 21.—A new store and warehouse has just been opened at 444 West Railroad avenue in Casper by the International Supply Company. This company has general offices at Tulsa, and district offices at Denver and Fort Worth. The Casper branch will be in charge of R. R. Hackley, who is store manager under the general supervision of John H. Moran, district manager for the Rocky Mountain region.

The Casper branch will carry a complete line of oil field tools and equipment, including Darling gate valves, Kennedy and Walworth fittings, American wire rope, Tubb's cordage, Oklahoma Iron Works drilling tools, Kewanee boilers, New York Belting and Packing Company's complete oil country lines, etc.

AMERICAN PRODUCTS ABROAD

Robinson, Ill., Jan. 23. — Norris Brothers of this city have the satisfaction of knowing that the "sun never sets on their products."

Quite an export business has been built up on their balls and seats and spring stuffing boxes as well as other oil well pumping equipment. Recently three orders were received in one morning from India, Sumatra and Venezuela.

COMPANY MOVES TO NEW OFFICE

New York, Jan. 23.—The Oil Conservation Engineering Company has placed on display in their New York office a complete line of cut open sections and samples of the entire line of Oceco equipment.

To provide for this exhibit, as well as to take care of increased business, they have moved from their original quarters to larger ones in the Cunard Building, 25 Broadway.

WILLIAMS WRENCH BOOKLET

The Genuine Williams' Vulcan Back-Up Wrench is described in a folder recently published by J. H. Williams & Company of Brooklyn, New York.

Williams wrenches are widely known and used throughout the oil fields of this country and this booklet gives sizes, specifications and prices of the back-up wrench especially adapted to rotary drillers.

Magnolia Builds More Tanks in Luling Field

Luling, Texas, Jan. 22.—Another 55,000 barrel storage tank is to be erected by the Magnolia Petroleum Company at its tank farm and refinery located near here. The Magnolia already has twenty-two 55,000 barrel tanks filled with crude oil from the Luling field, and is operating its refinery almost to capacity, selling the residue as fuel oil and shipping the tops via tank cars to its refinery at Beaumont.

Magnolia Topping Crude From Mirando Section

Mirando City, Texas, Jan. 22.—The high gravity crude being produced by the Magnolia Petroleum Company from the 1900 foot sand in the Schott pool section of Webb County, is now being topped by a temporary pipe still recently erected to take off the light contents of the crude to sell as gasoline. The residue is being directed to field storage. The Magnolia has stored practically all the oil produced in the Mirando City section, as well as that purchased from other producers, and now has five 55,000 barrel tanks about filled. Materials for another 55,000 barrel tank have been ordered for immediate erection at the company's tank farm in the field.

TRANSIT PUMP MOVES OFICES

Tulsa, Okla., Jan. 23.—Offices of the Transit Pump and Engine Company have been moved from 203 Mid-Co Building in Tulsa to 311 West First street, according to an announcement by L. S. Allen. The company represents Bear Tractors Inc., Anderson oil engines in this section and also handles pipe line equipment.

NATIONAL PUMP IN TULSA

Oil City, Pa., Jan. 23.—An office in the Kennedy building in Tulsa, Oklahoma, is being opened by the National Pump and Transit Company, manufacturers of pumps and other oil field equipment. William C. McLeod, who has been in charge of the company's Kansas City branch, will be in charge of the Tulsa office.

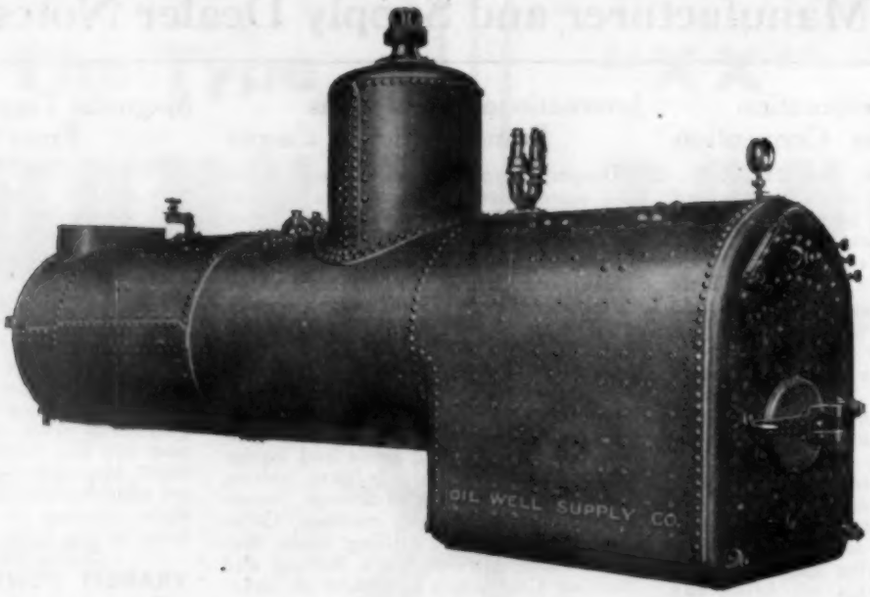
Name of Foundry Changed With Reorganization

Tulsa, Okla., Jan. 23.—W. P. Cunningham, president, announces a change in name of the B. & C. Machine and Foundry Company of Tulsa to the Cunningham Company, effective as of January 1. Mr. Cunningham heads the new company as president and general manager. Other officers are J. T. McCullough, secretary and treasurer, and E. N. Wycoff, vice president. These constitute the board of directors of the Cunningham Company.

Mr. Cunningham, who is a practical machine and foundry man of considerable experience and well and favorably known through the oil country, advises that the new concern will operate as in the past a general machine shop and foundry and will manufacture all kinds of oil field specialties and supplies. The company's general offices and factory are located at 212 South Norfolk in Tulsa.

NATIONAL SUPPLY IN DENVER

Denver, Colo., Jan. 22.—Sales offices of the National Supply Company in Denver have been re-opened in order to provide the company's trade in the Rocky Mountain region with closer personal service. Carleton Clymer, who has spent two years in Mexico for the National Supply, is in charge of the office.



A. S. M. E. CODE BOILERS

Ten of the twenty-two "Oilwell" A. S. M. E. Code Boilers recently delivered to Mid-West Refining Company at Salt Creek, Wyoming

A. S. M. E. Standard "Oilwell" Oil Country Boilers are constructed in strict accordance with the Rules of the Boiler Code Committee of the American Society of Mechanical Engineers, which requires that all materials be subjected to chemical and physical tests.

They are built for a working pressure of 150 pounds, using a factor of safety of five, and are made absolutely tight under a hydrostatic pressure of 225 pounds.

Each boiler is designed especially to obtain the maximum in steam space and water capacity, the horse power rating being based on 12 square feet of heating surface.

All operations during construction and also the final test are carefully inspected by an inspector who has been examined and licensed for such work by the States having the A. S. M. E. Boiler Code in operation. This inspector is not in our employ but is employed by a company making a business of furnishing such inspectors.

All boilers upon completion carry a stamping in accordance with the Code.

"Oilwell" Oil Country Boilers are made in various sizes from 26 to 100 H. P., and in locomotive and tubular (A. S. M. E. Code), Burma and Canadian, and regular oil country locomotive types. For complete information write for Bulletin No. 41.

"OILWELL" ESTD. 1862 TRADE MARK REGISTERED

OIL WELL SUPPLY CO.

PITTSBURGH, U. S. A.

New York San Francisco Los Angeles
London Tampico

OILWELL SUPPLY CO

World's Largest Manufacturers of Oil Field Equipment

Say you saw it in The Oil Weekly

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Union Tool Company Adds New Swab to Equipment

The Union Tool Company of Torrance, California, is adding to its Ideal equipment a new extra heavy casing swab embodying a number of valuable features. Patents are pending.

This new swab is made to run in all sizes of casing ranging from 5 3/16 to 12½ inches in diameter. It is equipped with a regular check valve or with the Ideal casing swab unloader as desired. Thie unloader has been designed to act the same as a regular check valve when the swab is lowered into the well. It relieves excess pressure on the rubber sleeve by allowing the spring operated valve to open and the excess fluid to pass entirely through the swab when it is pulled upward.

The rubber sleeves for the smaller sizes are 10 inches long and for the large size 12 inches long, and are made of a specially compounded rubber, which is least affected by the action of oil. The ends are beveled to clamp the sleeve securely between the flanges. The sleeve is thinnest at the center to allow it to be easily expanded.

The bodies are made in two sizes, the smallest size accommodates the 5 3/16, 6¼ and 6⅝ inch rubber sleeves and flanges and the larger size accommodates the 8¼, 10 and 12½ inch rubber sleeves and flanges.

To allow free passage of the fluid, the body has a large hole bored through the center connecting with three smaller holes to the flange shoulder. A series of smaller holes is drilled through the body and opening into the chamber of the rubber sleeve permitting the fluid to enter this chamber and automatically expand the rubber by pressure when the swab is pulled upward.

CATALOG ON FITTINGS

A catalog describing and illustrating steam jacketed pumps and fittings is announced by Guyton & Cumfer Manufacturing Company of Chicago, Illinois.

Steam jacketed pumps and fittings have been found to give excellent service where oil is handled. Such equipment removes the necessity for using torches or fire pots in dongerous contact with inflammable oils and gases.

This catalog gives cuts, diagrams, specifications and prices of the equipment handled by this company. Copies can be obtained upon inquiry.

UNION DIVIDEND

Los Angeles, Calif., Jan. 5.—The Union Oil Company of California directors have declared a dividend at the rate of $1.80 a share, payable January 26 to stockholders of record January 7.

BOOKLET ON COMPRESSED AIR

A pamphlet entitled "Trade Standards Adopted by the Compressed Air Society" has just been published, embodying the result of extended study and research on the part of the executives and engineers, associated with the members of that organization. It embraces the nomenclature and terminology relative to air compressors and their operations; a history of the development of speeds of air compressors; an explanation of capacities and pressures; instructions for the installation and care of air compressors with illustrations of devices suggested for cleaning the intake air; recommendation for the lubrication of air compressing machines and the cleaning of air receiver piping; a description of the low pressure nozzle test recommended by the society, and a partial list of applications of compressed air.

Copies may be had by addressing C. H. Rohrbach, 50 Church St., New York.

BERITE FOR PARAFFIN

Cleaning wells that have an accumulation of paraffin is the subject of a pamphlet called Berite, published by the Oil Well Supply Company, Pittsburgh, Pennsylvania.

Berite is a chemical composition that has been discovered which produces enough heat, when poured into a well, to melt any paraffin that may have collected. Full particulars may be obtained by writing for the circular.

RECORDING INSTRUMENTS CATALOG

The Foxboro Company, Inc., announces the publication of its latest bulletin. This is the second general catalog produced by the Foxboro organization and is classified as Bulletin 96-1.

Recording, indicating and controlling instruments are described in detail in this bulletin. Copies can be secured by writing The Foxboro Company, Inc., Foxboro, Massachusetts.

TRACTOR FOLDERS READY

Several folders have been published recently by Bear Tractors Incorporated New York, New York, giving details regarding the Bear tractor.

These folders consist largely of records established by tractors in actual operation. The records cover work done in several branches of industry including oil fields in various sections of the country. Cuts are included to show the adaptability of Bear tractors to severe oil field conditions.

Copies of these folders can be had upon application to the company.

Exposition and Congress

Tulsa, Okla., Jan. 22.—The second annual International Petroleum Exposition and Congress is to be held in Tulsa from October 2 to 11, according to an announcement made here by the executive committee.

NEW POWER CATALOG

Powers and Engines manufactured by the Marion Machine Foundry and Supply Company are featured in a catalog recently issued.

This catalog describes and gives specifications on band wheel powers, geared powers and pumpers, gas engines, reversible clutches and plain clutches.

Copies of the catalog may be secured upon application to the Marion Machine Foundry and Supply Company, Marion, Indiana.

New Company Specializes In Lines for Oil Fields

New York, N. Y., Jan. 21.—Of interest to the trade in the oil country is the recent organization of the American Cable Company with headquarters in New York, and plants at Garwood, New Jersey; Verona, Pennsylvania; and Newark and Dunellen, New Jersey. The company was organized for the purpose of taking over and merging the business of the Geo. C. Moon Company of New Jersey, the Upson-Walton Company of New York and the Pittsburgh Wire Rope Company of Pennsylvania.

C. H. Mathews is president and treasurer and George C Moon, vice president and general manager. The company specializes in the manufacture of wire rope for oil country use, and since its formation has established an increasing trade in the field. The capital stock of the company is $3,000,000 of seven per cent preferred and 150,000 shares of no par common.

M. G. Ensinger is the western representative of the American Cable Company and is making his headquarters in Tulsa, Oklahoma, at the offices of the Jarecki Manufacturing Company and Rex Machinery and Supply Company, distributors. American Cable Company products also are distributed by the Lucey Manufacturing Corporation, Fort Worth Well Machinery and Supply Company and branches. The western territory of the company embraces Oklahoma, Texas, Kansas, Louisiana, Arkansas, Wyoming and Montana.

Papers for Engineers on Electricity in Fields

Operation of oil wells by electric power and electric power in the oil fields are subjects of two technical papers published by the General Electric Company.

These papers are prepared by an engineer who has had extensive experience in adapting electric power to oil fields. He gives much detailed information of a statistical nature and illustrates each paper with outfits in operation. The papers are written from an engineering standpoint and should be of value to superintendents and foremen in acquainting themselves with electricity as a motive power in oil fields.

Copies of each paper may be secured upon application to the General Electric Company, Schenectady, New York, for technical papers 504 and 503.

LETTERS OF Paul Peebles P.S.G.

Thibodaux, La., Jan. 14, 1924.

Mr. Paul Peebles, P. S. G., O. E. T., etc.
Houston, Texas.
Dear Paul:

Your letter refusing to read my article on simplified geology unless you add some words, etc., received. Now, Paul, you are making a mistake, for at no time in your life have you had such an opportunity to add to your glory. I can't consent to your proposition for nothing can be added; it is simplicity itself.

Another thing you will have to do or we can't do business together, and that is quit your geological division of money received for our work, on the principal of all for you and nothing for me. This is a geological division, I know, but I can't agree to such.

Now, I have invented two side lines for you to put out for us when you go to the convention. Spot the geologists who live on hamburgers and eggs—they are the boys we want to help. Don't pay any attention to those who hang out at the big hotels—they are too slick for us, Paul. They would milk us dry and not even let us have the clabber.

But coming back to my inventions—one is my trained doodlebug oil finders and the other my never fail bollweevil killer, both a blessing in their ways; one helps the oil man and the other the farmer. The doodle-bugs and bollweevil killer in the hands of our geologists will make us rich. We will locate the oil, then kill the bollweevils for the farmer and in his gratitude he will give us leases on his land.

Just a few words on my inventions to convince you. First take my doodle-bugs—they are very intelligent and can easily be trained; for instance, I now have one bunch going down into the Paleozoic era. They can't be back with samples until the 3rd of March. But, Paul, they are on the way.

Now, my bollweevil killer—an accident you might say, caused me to invent it. I had a bollweevil on my table one day watching it walk around. My wife came in and said, somewhat sharply, "William, get me a bucket of coal!" I noticed the bollweevil jumped around and faced my wife. This convinced me it had ears. On this I went to work and invented a machine with a crushing attachment to it, that makes a noise like a growing cotton plant, and it works to perfection. The only trouble I see now is cotton is going to be too cheap for the farmer to make any money on it by killing all the weevils. But this is his look out. You and I can be on easy street and not give shucks if cotton goes to five cents per pound.

Paul, I put one of my trained doodle-bugs in a pair of my BVD's to send to you to experiment with, and went to the postoffice with the package. A young lady clerk asked me what was in it. I could not answer her, she being a woman. She got mad after holding the package to her ear for a while and said it was against the government rules to send varmints in the mails. She must have taken my poor old doodle-bug for a cootie. I will send same to you by express, any way.

Write me, Paul.

I am
WM. MIXER,
W. R. A., L. B. D. and P. D. B.

Mr. wm. mixer, etc.,
deer bill

well bill i hav yore letter about the artickle whitch you sent me and the doodle-bugs and wevil killer, an i see it is jest like i sed in mi other letter 2 yu. yu dont want me 2 git mi proper share of the prophets of any of these hear skeems we werk up, but yu do hav sents enuff 2 no that yu need mi endorstment of your invenshuns 2 put them over.

i do not like the way yore kickin about that artickle whitch yu rote on geeology. i hav bin bussy on it & hav werked up a skeem about whitch i will tell yu moar about later if yu want 2 cum in on a fare basis whitch will giv me a share of the prophets in keepin with what i put in2 to the deel on akount of my reppytashun an bein well noed as a high athorety on geeologicistical subjecks.

what i want 2 do now is start us a skool for geeologistis. i hav got sum pappers whitch a skool like that has alreddy put out & I see it is a good graft whitch i can run at nights & still hav plenty of time 2 do mi reglar werk in the day time. all it takes is sum pitchers of a well bein shot & printin under them sayin it is a big gusher, an we can put out sum big werds about this bein a milyun dollar perfession & we can get all kinds of suckers to take our corse.

we will go in this on the same rate whitch i tole yu bfore—six bits for me & 2 bits for yu & all the munny yu will hav 2 put up is for gettin the printin done. it is a hole lot of sucker lists whitch aint werkin now & whitch we ort 2 be abul 2 git holt of cheep & with a good sucker list we ort 2 be abul 2 line up a hole lot of peepul whitch wud like 2 be geeologists. we can say in our letters that we will teech the perfession in 1 lesson & then wen they send us 10$ we can send them a coppy of yore artikle on simplified geeology. then our gradwates will be a good buntch 2 sell yore traned doodle-bugs 2.

in the meen time i am watin 2 here from yu agin about the artikle & the skule bfore I say yes or no on the doodle-bugs an the bollweevils. I no a few bollweevils whitch I wud like 2 sea crunched alright, but yu cud attrack them better if yu made a noise like a bottil of corn.

but if yu go in with me or not, I am goin ahed & werk up sum letteture for mi correspondents corse in geeology & will hav sum samples for yu wen yu git reddy 2 put up the munny for the printin. we will hav 2 hurry up on it so we can have the corse all lade out & reddy 2 go bi the time the geeologists hav there meetin hear in march & also hav sum samples from the doodle-bugs so we can show them. then mabe we can arrange 2 git sum endorstments from sum of the geeologists 2 help us sell the corse.

if yu hav enny trubbel gettin yore wife 2 consent 2 yu sellin yore house an ford an cow so as 2 git the munny 2 run this hear skool with, yu can tell her that it wont be long bfore we will have 10$ bills rollin in in the male & evry time we git four of them yu will git one, whitch will be pritty soft for yu. Yu can then put in all yore time tranein doodle-bugs 2 keep the demand whitch we will creeate for them threw our stoodents.

yrs trooley,
paul peebles, p. s. g., etc.

ps. i aint seen that package whitch yu sed yu is sendin & it is coald hear this mornin. pp.

LIGHTNING LUBRICATOR
Stuffing Boxes

Lightning stuffing boxes are an improved design and are made in two styles, with either loose seat or regular pattern. All have the lubricator feature that makes them more desirable. They wear longer, require less attention, and are handier for the operator.
At all Republic Supply stores and the Oil Field Power & Equipment Co., San Antonio, Texas.
Also Pumping Powers, Jacks, Etc.

Oil Field Supply Dept.
KANSAS CITY HAY PRESS COMPANY
Kansas City, Mo.

SOVIET WANTS BIG LOAN

New York, N. Y., Jan. 16.—Cable dispatches from Moscow are that Russia is willing to grant Harry F. Sinclair complete rights to exploit western oil fields if a loan of $200,000,000 to $250,000,000 is raised for the soviet government.

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS

Indisputable Evidence No. 7

SOUTHWESTERN OIL DEVELOPMENT COMPANY

EASTLAND, TEXAS

July 7, 1923.

Black, Sivalls & Bryson,
Ft. Worth, Texas.

Gentlemen:

On February fourteenth we purchased from you four one-hundred barrel Perfection vapor-proof tanks and had them placed on our Crowley Lease near Breckenridge.

What we wish to advise is that these tanks have more than lived up to their guarantee, having raised the gravity from two to three per-cent. We consider them one of the best investments we have ever made.

Yours very truly,

SOUTHWESTERN OIL DEV. CO.,

By E. Hexheimer

EW/ES

'One of the Best Investments We Ever Made"

In view of the wonderful results obtained by the Southwestern Oil Development Co. by the use of Perfection Vapor Pressure Tanks, who wouldn't consider them "One of the best investments we ever made"?

Raising the gravity of the crude three per cent ought to make anyone enthusiastic.

Diagnosing a little further, such a statement means the Southwestern got more money for its oils, since the gravity was raised and the volume was not decreased by evaporation.

That's why our customers say Perfection Vapor Pressure Tanks are an investment instead of an expense.

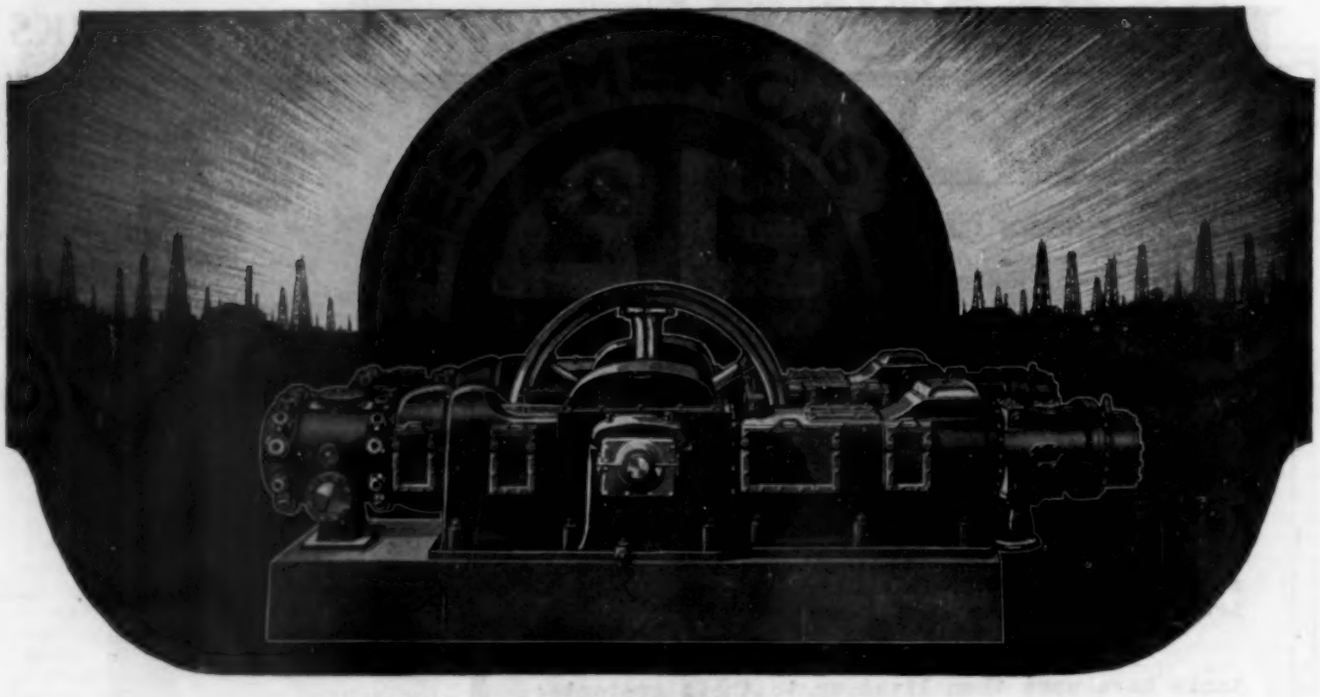
Consult our representative in your field. It will be the beginning of the best move ever made toward saving money.

Black Sivalls & Bryson
INC.

BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

Say you saw it in The Oil Weekly



Type Ten Bessemer Direct Gas Engine Driven Compressor

The Bessemer Oil Field Engine is the standard of the industry, and will be found in every oil field.

Bessemer Type VIIIB Compressor with engine and compressor in one unit. Standard equipment in the Gasoline-from-Gas Industry.

Industrial and Oil Field service prove the Bessemer Type IV Oil Engine most efficient and economical where gas is not available.

Mere Technical Excellence Is Not Enough

Oil field service is not theoretical—it is a problem of making good under conditions which are not ideal.

An engine that would operate beautifully in a laboratory under expert supervision might easily fail utterly in the field. Not every oil field engineer has the time to make himself into a Professor of Internal Combustion. An oil field engine must be P-R-A-C-T-I-C-A-L.

THE BESSEMER GAS ENGINE COMPANY
62 York Street ∴ ∴ Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Say you saw it in The Oil Weekly

SQUEAKS from the BULL WHEEL

Marriage Brings Them

They had just become engaged.

"I shall love," she cooed, "to share all your griefs and troubles."

"But, darling," he murmured, "I have none."

"No," she agreed, "but I mean when we are married."

Milwaukee Tank News.

Some Race Horse

A frigid-faced wife met a tired business man at the door one evening and silently proffered a bit of paper and on it was written: "All set for three, Lillian M."

Hubby paled and laughed nervously: "Oh yes, the boys at the office wanted me to put a little bet down on the third race, and Lillian M. was my horse."

Next evening wifey had an even stonier face.

"What's wrong now?" asked Hubby.

Wifey snapped: "Your horse called you up."

On His Way

Fair lady: "Is there no succor?"

Brave knight: "Yes, I'm coming."

Plain Teedle

There was a young man named Teedle,
Who wouldn't accept his degree;
He said, "It's enough to be Teedle,
Without being Teedle D D."

Good Measure Promised

Mrs. Benton was walking through the park when two ragged, dirty little boys, playing near by, stopped her, and the older one called out: "Say, lady, me kid brother does some dandy imitation stunts. Give him a dime and he'll imitate a chicken for youse."

"What will he do—crow?"

"Naw! No cheap thing like that, lady. He'll eat a worm."

Expert Accountant: "Before I give you an analysis of your books, I must know one thing."

Manufacturer: "What is that?"

E. A.: "Are you making a statement for the government or are you floating a new stock issue?"—D. A. C. News.

Wasted Effort

Baldheaded Guest—Well, sonny, what is it that amuses you?

Sonny—Nothing, only mother has put a brush and comb in your bedroom.

Not In It Now

The man had been brought into court on the charge of non-support. "Let me see," said the judge, "aren't you the man who was married in a cage of tigers and leopards?"

"Yes, your honor."

"Pretty exciting, wasn't it?"

"Well, your honor, it seemed so then. It wouldn't now."

"What you doin', chile?"

"Nothing, mammy."

"My, but yo' sho' is gettin' lak yo' father."

Elastic

Mr. Buyer: This is the limit. It's tough to pay 60 cents a pound for a broiling steak.

Mr. Butch: Yep, but it's tougher when you pay thirty.

Youngster (crying): Papa, I wanna drink.

Papa: Shut up you little idiot, so do I but I don't go around crying about it.

Handicapped

"Sam, do you solemnly swear to tell the truth, the whole truth and nothing but the truth?"

"Ah does, sah."

"Sam, what have you got to say for yourself?"

"Well, jedge, wif all dem limitations you have jes' put on me, Ah don't believe Ah has anything at all to say."

Citizen: "That's my car. A thief is just fixing a blowout."

Policeman: "All right, I'll go over and arrest him."

Citizen: "Sh-h-h! Wait till he gets the tire pumped up."

True Chivalry

The genius of a certain Arkansas editor showed itself recently when he printed the following news item in the local columns of his paper:

"Miss Beulah Blank, a Batesville belle of twenty summers, is visiting her twin brother, age thirty-two."

"The stork has brought a little peach,"
The nurse said with an air.
"I'm mighty glad," the father said,
"He didn't bring a pair."

A Reason

When Jimmy takes her out to ride
Each corner is a twister.
He drives so fast he makes her squeal,
And keeps both hands upon the wheel,
The lady is his sister.

No Rhyme or Reason

Teacher asked her class if they could compose a rhyme using the word "Nellie." She finally called on Johnny Jones. Johnny arose much embarrassed:

"There was a little girl named Nellie
Who fell in the water and wet her little feet."

"Why Johnny, that doesn't rhyme."

"I know it doesn't. The water wasn't deep enough."

—Pure Oil News.

The Last Straw

Mr. Busiman was exasperated with the telephone. Ten times that morning he had tried to get a number and each time something or other had prevented him from speaking. At last he got through.

"Hello!" he said. "Is Mr. X there?"

"Yes," replied a voice. "Do you want to speak to him?"

That was the last straw. Back went the reply in icy tones: "Oh, no! I merely rang him up to hand him a cigarette."

Telephone Record.

The Modern Way

"Will you allow me to ask you a question?" interrupted a man in the audience.

"Certainly, sir," said the lecturer.

"You have given us a lot of figures about immigration, increase of wealth, the growth of trusts and all that," said the man. "Let's see what you know about figures yourself. How do you find the greatest common divisor?"

Slowly and deliberately the orator took a glass of water.

Then he pointed his finger straight at the questioner. Lightning flashed from his eyes and he replied, in a voice that made the gas jets quiver:

"Advertise for it, you ignoramus!"

The audience cheered and yelled and stamped, and the wretched man who had asked the question crawled out of the hall a total wreck.—Fun.

"Say, pa."

"Well, my son."

"I took a walk through the cemetery today and read the inscriptions on all the tombstones."

"Well, what about it?"

"Where are all the wicked people buried.—The Railwayan.

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
CORDAGE

Red and Pale Paraffine Oils

General Sales Offices: PITTSBURGH, PA.

District Sales Offices:
NEW YORK, HOUSTON, ATLANTA, BOSTON, NEW ORLEANS
PHILADELPHIA

Ocean Terminals

Beverly, Mass.
Gibson's Point, Pa.
Port Tampa, Fla.
Port Arthur, Texas

Bayonne, N. J.
Savannah, Ga.
Gretna, La.
Magazine Point (Mobile), Ala.

Providence, R. I.
Jacksonville, Fla.
Galveston, Texas

Say you saw it in The Oil Weekly

GUIDE FOR PURCHASERS

Air Compressors—
Southern Engine & Pump Co.

Air Lift Pumping Equipment—
Sullivan Machinery Co.

Attorneys—
Hirsch & Hannay
Vinson, Elkins & Wood

Balls and Seats—
The Chas. N. Hough Mfg. Co.

Band Wheels—
Lee C. Moore & Co., Inc.

Banks—
Exchange Banks of Tulsa
Commercial National Bank

Belting—
Bridgeport Machinery Co.
Continental Supply Co.
D. F. Connolly Agency
Frick-Reid Supply Co.
Norris Bros.
Oil Well Supply Co.
Republic Supply Co.

Boilers—
Bridgeport Machine Co.
The Brownell Co.
D. F. Connolly Agency
Continental Supply Co.
Frick-Reid Supply Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Republic Supply Company
Titusville Iron Works Co.
United Iron Works, Inc.
See Oil Field Supplies and Tanks

Blowout Preventer—
Cameron Iron Works

Burners—
Gaso Pump & Burner Mfg. Co.
Norris Bros.

Bull Wheels—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Tulsa Rig Reel & Mfg. Co.

Calf Wheels—
Lee C. Moore & Co., Inc.

Casing—
David L. Schofield
Republic Supply Company
Superior Tube Co.

Casing Shoes—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Co.
Gulf Coast Machine & Supply Co.
The National Supply Cos.
Pelican Well Tool & Supply Co.
Republic Supply Company
W-K-M Co.

Cement Hardener—
The Sullivan Co.
W-K-M Co.

Compressors—
Butler Mfg. Co.
F. W. Heitmann Co.
Hope Engineering Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Cordage—
D. F. Connolly Agency
Continental Supply Co.
The National Supply Cos.
Republic Supply Company

Crown Blocks—
American Well & Pros. Co.
Boykin Machinery & Sup. Co.
Gulf Coast Machine & Supply Co.
International Derrick & Equipment Co.
Lufkin Foundry & Machine Co.
Oil City Iron Works, Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Couplings—
Harrisburg Pipe & Pipe Bending Co.
Superior Tube Co.

Dehydrating Processes—
W. S. Barnickel & Co.
Petroleum Rectifying Co.

Derricks and Rigs—
International Derrick & Equipment Co.
Lee C. Moore & Co.
National Turnbuckle Derrick Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Tulsa Rig Reel & Mfg. Co.
Superior Tube Co.

Diamond Core Drills—
Sullivan Machinery Co.

Disc Bits—
Rotary Disc Bit Co.

Ditchers—
Buckeye Traction Ditcher Co.

Draw Works—
American Well & Pros. Co.
Lufkin Foundry & Machine Co.

Drilling Cables—
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
The National Supply Cos.
Peden Iron & Steel Co.
Republic Supply Company
Williamsport Wire Rope Distributing Co.

Drilling Machines—
Bridgeport Machine Co
Keystone Driller Co.
Oil City Iron Works, Inc.
Parkersburg Rig & Reel Co.

Drill Pipe—
Continental Supply Co.
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Drilling Equipment—
American Well & Pros. Co.
Bridgeport Machine Co.
Continental Supply Co.
Oil City Iron Works
Republic Supply Company

Drive Pipe—
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Electrical Equipment—
Southwest Gen. Elec. Co.
Westinghouse Elec. & Mfg. Co.

Elevators—
B. & C. Machine & Fndy. Co.
Bridgeport Machine Co.
Dunn Mfg. Co.
Gulf Coast Machine & Supply Co.
Norris Bros.
Wilson & Willard Mfg. Co.

Engines, Diesel—
Western Machinery Co.

Engines, Gas—
The Braden Co.
Western Machinery Co.

Engines, Oil—
Continental Supply Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
American Well & Pros. Co.
Bessemer Gas Engine Co.
Bridgeport Machine Co.
The Brownell Co.
De La Vergne Machine Co.
Franklin Valveless Engine Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Company
Rock Island Plow Co.
Southern Engine & Pump Co.
Titusville Iron Works

Engineers—
C. N. Black
Samuel J. Caudill
David Donoghue
Foster & Reiter
F. W. Freeborn Eng. Co.
R. F. Kuehnle
Geo. C. Matson
Lee C. Moore & Co.
Oil Conservation Engineering Co.
L. H. Owen
D. T. Ring
F. N. Williams

Fire Protection—
Foamite-Childs Corporation
Oil Conservation Engineering Co.

Fish Tail Bits—
American Well & Pros. Co.
Federal Supply Co.
Gulf Coast Machine & Sup. Co.
Oil City Iron Works, Inc.
Pelican Well Tool & Sup. Co.
W-K-M Co.

Floor Circle Brace—
Dunn Mfg. Co.

Fuel Oil—
Gulf Ref. Co.
Sinclair Ref. Co.

Gas Traps—
Trumble Gas Trap Co.

Gasoline Extraction Compressors—
Bessemer Gas Engine Co.
Sullivan Machinery Co.

Gasoline and Oil Storage Tanks—
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.

Gauges—
The Foxboro Co., Inc.
Oil Conservation Engineering Co.

Gauge Boards—
The Foxboro Co., Inc.

Genuine Wrought Iron Casing—
Reading Iron Co.
Superior Tube Co.

Geologists—
Samuel J. Caudill
Alexander Deussen
David Donoghue
Edwin B. Hopkins
Foster & Reiter
Geo. C. Matson
Herald Bros.

Grips and Clamps—
Norris Bros.
J. P. Ratigan
W-K-M Co.

Heat Exchangers—
Brown Welding & Machine Co.

Hose—
D. F. Connolly Agency

Houses—
Crain Ready-Cut House Co.

Laboratory Equipment—
Fort Worth Laboratories

Lease Equipment—
The Braden Co.

Lighting Systems—
Bridgeport Machine Co.
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Co.
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Manufacturers—
Robinson Packer Co.

Maps—
Standard Blue Print, Map & Engineering Co.

Meters—
The Foxboro Co., Inc.

Motors—
Bradford Motor Co.
Southwest Gen. Elec. Co.
Westinghouse Electric & Mfg. Co.

Oil Field Supplies—
American Well & Pros. Co.
B. & C. Machine & Fndy. Co.
The Braden Co.
Bridgeport Machine Co.
Butler Mfg. Co.
D. F. Connolly Agency
Continental Supply Co.
Frick-Reid Supply Co.
Gulf Coast Mach. & Sup Co.
International Supply Co.
Kansas City Struct. Steel Co.
Lee C. Moore & Co.
The National Supply Cos.
Norris Bros.
Oil City Iron Works, Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company
Robinson Packer Co.
H. M. Spence
Superior Tube Co.
Tulsa Rig Reel & Mfg. Co.
United Iron Works, Inc.
W-K-M Co.

Oilwell Casing—
Republic Supply Company
Superior Tube Co.
Texas Pipe & Supply Co.

Packers—
The Guiberson Corp.
Layne & Bowler
Robinson Packer Co
Pelican Well Tool & Supply Co.
W-K-M Co.
Exner-Dodge Packer Co.

Packing—
D. F. Connolly Agency
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company

Paints—
Peden Iron & Steel Co.

Panel Boards—
Westinghouse Electric & Mfg. Co.

Patents—
Hardway & Cathey
Jesse R. Stone

Pipe Grips—
Norris Bros.
W-K-M Co.

Pipe—
A. M. Byers Co.
Continental Supply Co.
W. E. Detlor
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Company
David L. Schofield
Superior Tube Co.
Standard Seamless Tube Co.
Williamsport Wire Rope Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Wrenches—
Continental Supply Co.
Dunn Mfg. Co.
The Guiberson Corp.
Republic Supply Company

Portable Buildings—
Butler Mfg. Co.
International Derrick & Equipment Co.

Portable Compressors—
Sullivan Machinery Co.

Portable Drillings Rigs—
Bridgeport Machinery Co.
Lee C. Moore & Co.
Oil Well Service Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pulleys—
International Derrick & Equipment Co.
Lee C. Moore & Co.

Pulling Machines—
Clark Machine Co.
Myrick Machine Co.
Safety Pulling Machine Co.

Pumps—
Axelson Machine Co.
American Well & Pros. Co.
Continental Supply Co.
D. & B. Pump & Sup. Co.
Gardner Governor Co.
Frick-Reid Supply Co.
Gaso Pump & Burner Mfg. Co.
Norris Bros.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Company
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.

Pumping Powers—
The Braden Co.
Kansas City Hay Press Co.
H. M. Spence
Jensen Bros. Mfg. Co.

Refined Products—
Gulf Refining Company
Humble Oil & Refining Co.
Sinclair Refining Co.
Sunshine State Oil & Ref. Co.
The Texas Company

Recorders—
Fort Worth Laboratories
The Foxboro Co., Inc.

Refinery Equipment—
Butler Mfg. Co.
Continental Supply Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Kansas City Struct. Steel Co.
Oil Conservation Engineering Co.
Republic Supply Company
Titusville Iron Works
United Iron Works Inc.
Wyatt Metal & Boiler Works

Books On Petroleum

The knowledge gained through years of work and study by some of the most capable men in the oil industry is set down in the books listed herein. Order some of these books and profit by the experience of others.

Petroleum Production Methods, by John R. Suman. Third Edition. Completely revised and brought down to date. Postpaid $6.

Deep Well Drilling, by W. H. Jeffery. A comprehensive handbook covering modern practices of drilling by cable tool and rotary methods. Postpaid $5.

Handbook of the Petroleum Industry, by David T. Day. One of the most comprehensive works on petroleum ever published. 2 vols. Postpaid $15.

Field Methods in Petroleum Geology, by Cox, Dake & Muilenburg. Describes methods of using instruments employed by petroleum geologists. Postpaid $4.

Oil Valuation & Taxation, by Jas. I Tucker. A study and non-technical analysis of the Federal Income Tax law applied to the oil business. Postpaid $3.

The Business of Oil Production, by Johnson & Huntley. Describes the principles of company organization as regards scope, personnel and methods. $3.50.

Popular Oil Geology, by Victor Zeigler. Presents fundamental principles of oil geology for the man without technical knowledge of the subject. $3.00.

Prospecting for Oil and Gas, by L. S. Panyity. Describes the various tools and methods of the present day oil and gas prospector. Postpaid $3.25.

Handbook of Petroleum, Asphalt and Natural Gas, by Roy Cross. A complete handbook, covering production and refining of petroleum. Postpaid $7.50.

Economics of Petroleum, by Joseph E. Pogue. Discusses the economic aspects of the petroleum industry with charts, figures and facts. Postpaid $6.

Oil Land Development and Valuation, by R. P. McLaughlin. The best methods of oil land development as acquired in ten years investigation. Postpaid $3.

Field Mapping for the Oil Geologist, by C. A. Warner. Practical field methods of value to geologists. Postpaid $2.50.

American Petroleum Industry, by Bacon & Hamor. A comprehensive and authoritative treatment of the American Petroleum Industry. Postpaid $12.

Principles of Oil and Gas Production, by Roswell H. Johnson. Occurrence of oil and gas, Location of Wells, Management and valuation of properties. $4.50.

Handbook on Petroleum by Thomson & Redwood. A complete treatise on production, refining and transportation of petroleum. Postpaid $6.

Send us your order NOW

THE GULF PUBLISHING CO.

P. O. Box 1307, Houston, Texas

GUIDE FOR PURCHASERS—Continued

Rig Irons—
Frick-Reid Supply Co.
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Company

Rotary Rock Bits—
Hughes Tool Co.

Rotary Fish Tail Bits—
Continental Supply Co.
Federal Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Company
W-K-M Co.

Rubber Fillers—
National Rubber Filler Co.

Sectional Steel Buildings—
The Braden Co.

Separators—
Butler Mfg. Co.
Trumble Gas Trap Co.

Strainers—
Layne & Bowler Co.
Pelican Well Tool & Supply Co.

Structural Steel—
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Pennsylvania Tank Car Co.
United Iron Works, Inc.

Steel Derricks—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Superior Tube Co.

Steel Crown Blocks—
Gulf Coast Mach. & Supply Co.
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Manufacturers—
Colonial Steel Co.
Sizer Steel Corp.

Steel Storage Tanks—
Butler Mfg. Co.

Strainers—
J. H. McEvoy & Co.
W-K-M Co.

Sucker Rod Lines—
D. F. Connolly Agency
Continental Supply Co.

Sucker Rods—
Axelson Machine Co.
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Norris Bros.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Company

Sucker Rod Sockets—
Brown Welding & Machine Co.

Swabs—
B & C Machine & Foundry Co.

Tank Cars—
Pennsylvania Tank Car Co.

Tanks—
Butler Mfg. Co.
Black, Sivalls & Bryson
The Brownell Co.
Gantz Tank Co.
Graver Corporation
Kansas City Struct. Steel Co.
Maloney Tank Co.
Columbia Steel Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works
United Iron Works Co.
Wyatt Metal & Boiler Works

Tank Equipment—
Oil Conservation Engineering Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Thermometers—
Fort Worth Laboratories
The Foxboro Co., Inc.

Tongs—
Bridgeport Machine Co.
Dunn Mfg. Co.
Guiberson Corp.
Norris Bros.
Pelican Well Tool & Supply Co.
Wilson & Willard Mfg. Co.
W-K-M Co.

Tool Joints—
American Well & Pros. Co.
Boykin Machinery & Sup. Co.
Bridgeport Machine Co.
Continental Supply Co.
Federal Supply Co.
Hughes Tool Co.
Pelican Well Tool & Sup. Co.

Tool Joints—(Cont.)
Republic Supply Co.
W-K-M Co.

Tools (Fishing and Drilling)—
Bridgeport Machine Co.
Brown Welding & Machine Co.
Frick-Reid Supply Co.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Republic Supply Company
Sullivan Machinery Co.
W-K-M Co.

Tractors—
Bear Tractors, Inc.

Tractor Winch—
Rock Island Plow Co.
Tulsa Rig Reel & Mfg. Co.

Traveling Blocks—
American Well & Pros. Co.
Boykin Machinery & Sup. Co.
Gulf Coast Machine & Supply Co.
Lufkin Foundry & Machine Co.
Oil City Iron Works, Inc.

Tubing Catcher—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Lines—
D. F. Connolly Agency

Tubing—
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Underreamers—
American Well & Pros. Co.
Bridgeport Machine Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Sullivan Machinery Co.

Valves—
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
Ludlow Valve Mfg. Co.
Oil Conservation Engineering Co.
Pratt & Cady
Reading Steel Casting Co.
Reading Valve & Fittings Co.
Westcott Valve Mfg. Co.
W-K-M Co.

Valves and Fittings—
Continental Supply Co.
Darling Valve & Mfg. Co.
D & B Pump & Sup. Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The National Supply Cos.
Norris Bros.
Peden Iron & Steel Co.
Pratt & Cady
Republic Supply Company
Reading Steel Casting Co.
Reading Valve & Fittings Co.
United Iron Works
W-K-M Co.

Walking Beams—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Imperial Brass Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Co.
D & B Pump & Sup. Co.
Republic Supply Company
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co.
McGregor Working Barrel Co.

Water Gauges—
F. W. Heitmann Co.

Water Cans—
H. P. Gott Mfg. Co.

Wire Rope—
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Co.
Houston Oil Field Material Co.
International Supply Co.
Republic Supply Company
The National Supply Cos.
Williamsport Wire Rope Distributing Co.

Wrenches—
Ever-Grip Wrench Co.

"Are They as Good as Harrisburg?"

A natural question when other couplings are offered in place of Harrisburg Couplings of Forged Seamless Steel. And a question which any oil operator who has compared results will gladly answer.

Harrisburg Seamless Steel Couplings are forged from a steel developed by us for oil field use. No weld—no weakness. Each has the perfect thread and perfect taper that seals with a single turn; plus a double strength that means immunity from cracking, stripping or galling.

After you have put Harrisburg Couplings through a test that would ruin an ordinary coupling—you will know why they are the standard of comparison.

Sold by leading dealers and supply houses

HARRISBURG PIPE & PIPE BENDING CO.
Harrisburg, Pa.

The familiar Harrisburg Keystone is more than a trade mark. Its appearance on couplings, bull-plugs, swedged nipples and pump liners means money saved by minimizing delays, replacements and wages paid for unproductive work.

HARRISBURG

Forged Seamless Steel Couplings

Since the Days of SPINDLE TOP

Many of the old time drillers remember the hectic days of Spindle Top—the pioneer days of the Oil Industry in Texas.

That was almost a quarter of a century ago. The American Well & Prospecting Co., of Corsicana, Texas, was manufacturing oil field equipment and supplies even at that early date.

As the years passed, conditions brought about many changes in the needs of the oil producer. Lessons were learned by experience. Throughout this period "Gumbo Buster" products have maintained a place in the foreground.

Gumbo Buster Products ARE DEPENDABLE. They are the result of time, experience and science. They have proven themselves by 25 years of service.

Republic Supply Co.
Distributors
Texas -:- Louisiana -:- Arkansas -:- Oklahoma

'GUMBO BUSTER' PRODUCTS

- Rotary
- Draw Works
- Pump
- Drilling Engine
- Traveling Blocks
- Etc.

AMERICAN WELL & PROSPECTING CO.
CORSICANA, TEXAS.
CALIFORNIA BRANCH—LOS ANGELES